Clinical Lecture
ON
TWO CASES OF CEREBELLAR DISEASE.

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(Concluded from p. 299.)

1. THE abundance and prominence of extrinsic symptoms in diseases of the cerebellum derive their liability and character from the anatomical relations of this part, though the production or not of such symptoms is largely dependent upon the nature of the lesion in different cases—as, for instance, whether it is associated with increased bulk of the organ (as in most cases of hæmorrhage, abscess, or tumour), whether such increased bulk has been suddenly or gradually produced, and, finally, whether it is great or small.

The importance of these considerations will be seen if you bear in mind the firm and comparatively unyielding boundaries of what I may call the "sub-tentorial chamber," and if you will strive to picture to yourselves how the addition of new matter in or upon the surface of the cerebellum, within such a rigid chamber, must inevitably produce an injurious amount of pressure, which will operate either (*a*) upon the underlying mesencephalon and medulla, bounded as they are on the other side by the unyielding basilar portion of the occipital bone, or else (*b*) upon some of numerous venous sinuses which converge around the cerebellum in all directions. Not the least important of these venous channels is the "straight" sinus, pressure upon which not only interferes with the circulation and nutrition of the great basal ganglia, but leads to ventricular dropsy and its attendant symptoms.

Another important cause of the admixture of extrinsic symptoms exists in forms of cerebellar disease which are not so specially associated with increased bulk of the organ—viz., in cases of softening. The same conditions, whether thrombosis or embolism, which initiate this pathological process in some part of the cerebellum, are, owing to community of vascular supply, very apt to cause at the same time a similar process either in some part of the mesencephalon, of the corpora quadrigemina, or of the posterior and inferior parts of one of the cerebral hemispheres.

2. On account of the anatomical relations already indicated, any suddenly initiated large hæmorrhage, or the establishment of vascular conditions tending to induce extensive softening of the cerebellum, may be ushered in by an apoplectic attack as profound as if we had to do with some extensive disease of the cerebrum. Such cases have, indeed, been frequently confounded with cerebral disease; and this is not to be wondered at, seeing that the *coma* which occurs is practically due to sudden shock (either from pressure or arrested blood-supply) in the great mesencephalic centres, and the resulting temporary disturbance of the functions of the cerebrum as a whole. And even if *convulsions* occur during the course of such an attack, as they do occasionally, this is not to be wondered at, when we reflect upon the mere topographical, as well as the structural, relations of the cerebellum with the medulla and the pons.

But even when the first shock-like stage of the malady has been recovered from in such an affection of the cerebellum, the case is not altogether free from the chance of being confounded with one of cerebral origin, since a more or less perfect *hemiplegia* may remain. For a long time this hemiplegia was believed to be directly due to the disease of the cerebellum itself; and inasmuch as it was found to implicate the side of the body opposite to that of the cerebellar lesion, Andral drew the erroneous conclusion that the lateral lobes of the cerebellum had a functional cross relation, similar to that of the cerebrum, with the halves of the body. It is now definitely established, however, that the cerebellum has no such cross relation, and whilst modern observation confirms the facts observed by Andral—viz., that paralysis is apt to occur on the side opposite to the cerebellar lesion—it is able to explain them differently. The paralysis may, indeed, be not directly due to lesion of the cerebellar tissue, but rather to the unilateral pressure which this occasions upon the corresponding side of the pons and medulla, and to the consequent failure of motor power in the opposite half of the body. It has only been after long-continued discussion and observation that this more correct interpretation has been arrived at. Meanwhile you should also know that in these cases of one-sided paralysis associated with, but only indirectly related to, disease of the opposite side of the cerebellum, paralysis of the face is often absent or little marked; and, contrary to what most frequently obtains in hemiplegia, the leg is more powerless than the arm. In these cases sensibility is often not at all impaired, though it may be lessened or even exalted on one side of the body. Rarely, the fifth nerve or the seventh nerve may be pressed upon on the side of lesion, and then we have, in addition to other symptoms, marked insensibility over the territory of the corresponding sensory nerve, or a complete unilateral paralysis of the face.

In such forms of disease as I have just been referring to—namely, large hæmorrhages into or softenings of the cerebellum—occipital *cephalalgia* and *vomiting* may not be very marked symptoms. They may, indeed, be little more obtrusive from their severity than they are wont to be in various forms of cerebral disease. It is altogether different, however, with some of the subacute or more chronic forms of cerebellar disease—namely, those due to abscess or to tumour. Here, these two symptoms are apt to be much more prominent, and to occur also with far greater frequency. Where they are present to a well-marked extent, and where, in addition, we have either *amblyopia* or *amaurosis* together with a peculiar *staggering gait*, the diagnosis of cerebellar disease, as in the cases now before us, is one which may be arrived at with considerable certainty.

3. Let us, therefore, briefly consider the mode of production and significance of these four symptoms in cases of subacute or chronic cerebellar disease. Do not forget, however, that it is not the individual symptoms which are distinctive, but the combination of occipital cephalalgia, of vomiting, amaurosis, and a staggering gait which must be looked to. A word or two may be said concerning the mode of production of each of these symptoms in their connexion with disease of the cerebellum.

The *cephalalgia* which is often so marked in the occipital region is not likely to be due to any affection of the cerebellar tissue itself, but, like severe pain in encephalic diseases generally, is most frequently attributable to implication of the meninges. And, except in cases where surface inflammation exists, this symptom is usually most marked in proportion to the pressure upon and consequent tension of the tentorium cerebelli. It is, therefore, as a rule, more frequently met with in cases of abscess and tumour than in cases of softening or of moderate hæmorrhage; whilst in very large hæmorrhages the place of this symptom is usurped by a comatose condition, produced as before indicated.

The association of attacks of *vomiting* with severe headache is common in encephalic diseases generally, and this symptom may be met with in conjunction with diseases of the cerebrum having the most varied seat and nature. But when the vomiting is of a very obstinate and recurrent character, as it was in our two patients, and when, moreover, it is combined with persistent or paroxysmal occipital pain, it may always give rise to the suspicion of cerebellar disease, because such a combination of symptoms is met with in a considerable percentage of the diseases of this part of the encephalon. Whether such a suspicion is to prove well or ill founded will, of course, much depend upon the nature of other associated symptoms. You may therefore remember that the same tension beneath the tentorium and irritation of the medulla which gives rise to the cephalalgia and vomiting may also give rise to at least one other symptom—viz., failure of sight, or actual blindness.

The not unfrequent association of *amblyopia* or *amaurosis* with lesions of the cerebellum is well known. As Andral suggested, in explanation of this, it is well to bear in mind the close structural relation which exists between the cerebellum (especially its upper, central portions) and the corpora quadrigemina, from the latter thence arising that the all-important visual centres which they contain may become implicated. Such a mode of impairment of sight is, however, probably altogether secondary to another, which is also operative where abscess or tumour implicates various parts of

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the cerebrum. I allude to increased intracranial pressure with impeded return of blood, leading to optic neuritis, and, it may be, to a sequential white atrophy. But it is with many diseases of the cerebellum that such causes are especially prone to come into operation. When a new growth or an abscess exists beneath the tentorium, the space is too confined and limited to admit of much adaptation by slight displacement, such as may more easily occur if a growth of the same size should appear in parts of the cranium above the tentorium. The full effects of the pressure are therefore felt, and the chances are great that the return of blood from the optic nerves may be interfered with by such pressure. This you will easily realise if you will only call to mind the situation of the transverse, and of the superior and inferior petrosal sinuses by which the blood from each retina and optic nerve is ultimately brought to the jugular foramen. In each of our cases we have had optic neuritis, and in one of them we had also an early stage of white atrophy, corresponding with an incomplete amaurosis. The improvement of sight in this latter case commenced with the amelioration of other symptoms, and doubtless at a time when injurious pressure, impeding the proper return of blood and producing so many different troubles, began to disappear.

But some of you, at least, know that optic neuritis and its consequences, together with cephalalgia, are common accompaniments of tumours and of abscesses affecting different parts of the cerebrum, and that they are occasioned in much the same way as I have just been indicating. You will see, therefore, the importance of paying attention to the seat of pain and to the severity and persistency of the vomiting. In cerebellar disease the pain is most frequently occipital, and the vomiting is often a prominent and very obstinate symptom; in cerebral disease, on the other hand, the pain is often otherwise localised, and vomiting is generally a less marked and more transitory symptom—if it be not altogether absent. We may, too, have in the latter case the occurrence of unilateral convulsions to aid us in arriving at a diagnosis, especially if the growth occupies the parietal region; whilst in cases of cerebellar disease we may also often have some additional symptom present tending to confirm our opinion as to the region affected. Such a confirmatory symptom has been present in each of our cases, and now remains to be briefly referred to.

The peculiar *staggering gait*, which in these patients you have an excellent opportunity of studying for yourselves, and which is sufficiently described in the notes of the cases, is very characteristic of cerebellar disease. Its exact cause or mode of production I shall not now attempt to discuss. I will only remind you that as a clinical phenomenon it is most closely allied to the ataxic gait exhibited by patients suffering from posterior spinal sclerosis, though the latter condition is distinguished by the more spasmodic and jerky movements of the feet, and by its more marked association with vertigo, even when the eyes are open, but more especially when they are closed. The cerebellum is to be regarded as a highly specialised outgrowth from the spinal cord and medulla (having, like the former, "cross" relations with the cerebral hemispheres), and there is most probably a continuity in structure as well as a community in function between the posterior columns of the cord and this great ganglionic mass. Lesions of each of these parts are, therefore, apt to reveal themselves clinically by a certain amount of inco-ordination of movement, though with very different degrees of frequency. When the posterior columns are seriously implicated, inco-ordination is constant, but where the cerebellum is the part affected, the inco-ordination in question is only occasionally observable. It would be very interesting, if there were time, to go into the question why this kind of inco-ordination does not show itself more frequently as a symptom of cerebellar disease, especially as this particular symptom, unlike the others previously referred to, is (from the point of view of its origin) to be regarded as an intrinsic rather than an extrinsic symptom. I can now, however, barely throw out the hint that the manifestation of this symptom in disease of the cerebellum necessarily depends upon the extent and situation of the lesion. In many cases it is obscured or altogether blotted out as a symptom, by the occurrence of paralysis, indirectly induced by pressure upon the pons or medulla; whilst in other cases the lesion may be too slight to cause any general disturbance of cerebellar function. This is a matter deserving of careful consideration, but I must reserve its fuller discussion for some future occasion, when I may perhaps also be able to bring under your notice other interesting signs and symptoms which are more rarely met with in cases of cerebellar disease.

After what I have already said to you, I may be very brief in regard to the pathological diagnosis in our two cases of cerebellar disease. The history and mode of onset make it seem most probable that in Jessie J—— some slight traumatic or concussion lesion occurred at the time of the accident, and that gradually some irritative or sub-inflammatory change was set up at the original seat of lesion (whether this was a mere superficial bruise or some internal small extravasation of blood) which finally led to the production of a small abscess. After a time its increase was checked, and after a still longer time (coincident with the great improvement in the patient's condition, about last Christmas) its contents probably began to be absorbed. Now we may have a mere shrunken cyst-like cavity, and it is to be hoped that in time the last symptom of disease may disappear, and the patient's mode of walking may again become quite natural. She is now growing fast, and her general health is very good; so that there is much reason for expecting a perfect recovery.

In regard to the other patient, Ada B——, it is more difficult to form any decided opinion, though perhaps the course of events has not been very different. It seems clear from the little patient's history that she was never quite well after the fall from the table, and it appears probable that some actual damage to the cerebellum occurred at that time. Whatever the nature of the subsequent changes, it seems evident that they were of a very slow and gradual nature, since no appreciable difficulty in walking was noticed till nearly nine months after the accident. There may have been sub-inflammatory changes gradually passing on to suppuration, or it is possible that we may here have to do with some small tumour. In either case, the child appears to be decidedly improving since she has come under treatment, and for the present there seems no reason to alter the medicines she is taking. Time will show whether the improvement is merely temporary, or whether, as in the other case, it is to be more permanent and progressive.

NOTE ON

PARACENTESIS ABDOMINIS AND THORACIS BY CAPILLARY TUBES.

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CASE 1.—Susannah C——, aged seventy, was admitted into Guy's under my care on April 17th. She was suffering at the time from extreme ascites with corresponding distress in breathing from the interference with the respiratory organs by the upward pressure of the fluid in the abdomen. Some months before she had been in the hospital under Dr. Wilks, and had experienced great relief from paracentesis, so much so that she said she had been quite well since. The fluid in the abdomen had re-collected lately. She was considerably wasted, but otherwise in fair health. The viscera were all normal, except the liver, which was, in all probability, cirrhosed. The peritoneum was tapped by a Southey's cannula, introduced on the right side of the abdomen below the level of the umbilicus. An india-rubber drainage-tube was attached, and fluid allowed to run for about twenty-one hours. By this time some eight pints of ascitic fluid had drained away, and the distension was quite relieved. The abdomen was now bandaged tightly, and the patient left the hospital a few days afterwards.

CASE 2.—Henry A——, aged six, admitted into the Evelina Hospital under my care, by the kindness of Dr. Frederick Taylor. He had had rheumatic fever or scarlatina before Christmas, and soon afterwards his legs were found to be swollen. He was admitted for extreme anasarca of the face, trunk, and extremities, and with the abdomen painfully distended with ascitic fluid. The heart was large, and there was free mitral regurgitation, the urine being normal, but scanty. The peritoneum was tapped at once by a capillary tube introduced to the right of the umbilicus, that being the dependent side. An india-rubber tube was at-

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tached, and between 1 P.M. and 10 P.M., when the boy pulled out the tube, 6 pints 14 oz. had drained away. He was much relieved. He was ordered two drachms of the resin-of-copaiba mixture, and to this some tincture of digitalis was subsequently added. Notwithstanding this the abdomen filled again. He was now tapped again in the same way as before, the cannula being left in the peritoneal cavity for forty-eight hours. Ten pints of fluid had drained away, the latter part of it containing a little thick ropy sediment. He had complained of a little pain during the last few hours, which was to be attributed, I think, to the fact that the peritoneum had become emptied of its fluid, and the cannula consequently rubbed against the intestinal coils. He had no other adverse symptom from the operation.

CASE 3.—Mary F——, with general anasarca and ascites, the result of capillary bronchitis and distension of the right side of the heart, was admitted under Dr. Moxon's care, and it ultimately became necessary to tap the abdomen. A capillary tube was introduced, as in the preceding cases, and the peritoneum drained for about twenty-four hours. Nine pints of fluid were obtained in that time. She has been relieved, and has suffered no inconvenience from the operation.

CASE 4.—Benjamin H——, aged twenty-six, came as an out-patient, with ascites to such an extent that he was unable to walk upright from the pain the abdominal distension gave him. He had also double pleurisy, and from this and other reasons the case was considered to be one of tubercular disease of the serous membranes. He was admitted under Dr. Moxon, and paracentesis was at first performed in the ordinary way with a large trocar and cannula. He was much relieved, and left the hospital for a short time, after a long stay, for a convalescent home. He was then readmitted under my care in a similar state to that when he came first, the abdomen being again painfully distended. He was now tapped by a capillary cannula, and ten pints of fluid removed in the course of twenty-one hours, when the tube was withdrawn. He was much relieved, and has suffered no inconvenience from the mode of tapping adopted.

This method of performing paracentesis abdominis will be sufficiently clear from a perusal of the cases. Dr. Southey's proposal for the treatment of anasarca is borrowed and applied to the treatment of fluid in the abdominal cavity—that is to say, a cannula of very fine bore is passed into the peritoneum, and, by means of a long drainage-tube attached to it, the fluid is slowly drained away. In the first instance the tubes made for the purpose of draining the subcutaneous cellular tissue were used, and they answered very well in that particular case; but, doubting whether they would in all cases be long enough, Mr. Hawksley made me some of additional length—one inch and a half,—but in all other respects after Dr. Southey's pattern. These have been in use since. The tubes have been retained in the abdomen for varying periods, but generally for about twenty-four hours, and it will not often be necessary to continue the drainage for a longer time than that. Should it be otherwise it would probably be better to withdraw the tube and insert another at some other spot.

Besides these cases of ascites, I have treated in a similar way a suppurating hydatid cyst in the lower part of the abdomen and an empyema. Both drained for a few hours very well, and the empyema was probably thoroughly drained; the hydatid cyst, however, ceased to run, and other measures became necessary.

It is not to be expected that purulent fluids can often be treated advantageously by drainage through very minute tubes, and particularly in the chest, where the pus is liable to be thick. Still cases do occur in which such a plan is applicable, and there can be no harm in testing this as a preliminary measure. In pleuritic effusions of serous character slow drainage of this kind has, I think, several points in its favour, as compared with aspiration; and in peritoneal effusions, in which we can calculate with considerable confidence upon the limpid nature of the fluid, the advantages of paracentesis performed in this way are sufficiently obvious to make it a wonder that it is not more usually adopted. I will enumerate these shortly.

In the first place, there is the difference in the severity of the operations. In the one case there is the incision through the skin, and then the passage of a large trocar. Both these stages, though not particularly painful, are, nevertheless, somewhat so, and, at any rate, unnecessarily so if a smaller operation will do as well. Paracentesis by a minute trocar and cannula is hardly more than the prick of a pin, and even a child does not mind it.

Secondly, the major operation is by no means free from the risk of peritonitis. I am not prepared at the moment to say in what percentage of cases of paracentesis after the usual fashion peritonitis is set up, but I know that the two conditions are frequently associated. Dr. Habershon, in 501 cases of peritonitis, gives fourteen as occurring after paracentesis.[1] It is nothing to the point to say, as may be said, that other predisposing causes coexist and should share the blame; or, rather, it is very much to the point as an argument in favour of reducing any additional risk to its lowest possible limit. It may yet be a question whether a small cannula lessens this risk, because what is gained by diminishing the size of the tube is lost, may be, by its prolonged retention. Still, there is *primâ facie* evidence, derivable from experience in other parts of the body, which goes to show that a tube will remain as a syphon drain in an otherwise closed cavity for a long time without doing any mischief, and upon that point I entertain no doubt whatever.

Thirdly, and this is the most important consideration of all, in the major operation the peritoneum is drained at once, and almost completely; in the minor, more or less of the fluid is removed gradually in the course of some hours. But except in occasional cases, where the respiration is urgently embarrassed, and immediate relief is necessary, it is not only not requisite, but probably it is harmful, to empty the peritoneal cavity suddenly. Shock is one of the risks usually said to attach to the operation of paracentesis abdominis, and that term would include a certain, though small, proportion of cases in which the sudden abstraction of many pints of fluid from the abdominal cavity interferes with the normal action of the heart, and syncope ensues; and another group in which the same abstraction of fluid so alters the condition of the circulation in the abdominal viscera that for the time being, and until this rights itself, there is more or less temporary stasis. All this is obviated by withdrawing the fluid slowly. But more than this, one of the main advantages of paracentesis is lost to us by this, our usual method. Under such circumstances, the operation is not, and cannot be, employed remedially. We perform paracentesis when we can no longer help it, to stave off some worse trouble. But surely there are many cases in which a timely withdrawal of a certain amount of fluid and careful attention to strapping and bandaging of the abdominal walls at the same time would be followed by permanent relief and sometimes by cure. *Per contra*, to empty the abdominal cavity at once is to favour the immediate transudation of so much more fluid, and to do away with the prospect of any than the most temporary benefit.

One caution is necessary in using small drainage-tubes, and this is that the difficulty of cleaning them is in inverse proportion to the diminution of their calibre; and they should, I think, always be placed in some boiling germicide, such as a solution of carbolic acid, before their introduction.

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ON A CASE OF

RUPTURE OF THE QUADRICEPS EXTENSOR CRURIS IN BOTH LIMBS; OPERATION.

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J. D——, a labouring man, aged sixty-four, was admitted to the Edinburgh Infirmary, under the care of Professor Lister, on the 18th of May, 1877, complaining of weakness in his lower limbs, and a constant tendency to fall. He stated that in February, 1873, he was knocked down by a cart, which he and some others were endeavouring to lift, and that while in the act of rising the shaft struck his right knee, which was flexed at the time, and immediately disabled him, so that he had to be assisted to his feet. He lay for a fortnight at his home, and applied fomentations to the injured limb. There was considerable swelling, and before it had quite subsided he returned to his work, but remained so lame as to require the use of a stick. In May, 1874, he stumbled, and, with a view to protecting the right and

[1] Diseases of the Abdomen, Second Edition, p. 556.

enfeebled knee, he flexed his left knee, so as to fall on it. He was unable to rise, was carried to the hospital of the town where he resided, and lay there for a month, being treated, he said, for "rheumatics." Since leaving hospital he had been unable to work, and he came to Edinburgh to see whether anything could be done to improve his condition.

The patient was spare, and somewhat feeble-looking, pale, and of fair complexion. He was very deaf, but hearty in manner. On being asked to expose the limbs, the nature of his injuries at once became evident. The skin above the level of each patella was loose and wrinkled, and the upper edge of that bone hung prominently forward, so much so, indeed, that the fingers could easily be pushed down in the fold of skin between the knee-pan and the femur, and the outline of the articular surface of the latter could be distinctly felt. When the patient was seated in a chair, with the knees bent to a right angle, he could not extend them even in the smallest degree; but if one of his legs were passively extended, he was able to maintain it, and even to hold it up, in that position. If now the extended limb were slowly and gently flexed by the surgeon, it was seen that the power of bringing the limb back to the straight position remained till flexion had reached a certain point—viz., an angle of about 157 degrees,—when the leg suddenly dropped with a slight crack, and the patient was unable again to raise it. Closer observation showed that the whole attachment of the quadriceps to the patella was divided, the rectus being contracted upwards, and that the only portions of the muscle which remained functionally available were two lateral and posterior strands of the vasti, internal and external, which were attached to the fascia lata of the leg, and to the capsule of the knee-joint. When the limb was extended these portions of muscle were slightly anterior to the line of the limb, and consequently acted as extensors; but when the knee was flexed to an angle of about 157 degrees, they slipped back over the tuberosities of the femur, and immediately thereon came into play as flexors. When the knee was fully bent the outline of the trochlea of the femur was beautifully seen, having the skin stretched over it. The condition was almost precisely identical in both limbs.

As might have been expected under such circumstances, the man was very helpless. He could stand quite securely, but he scarcely dared move without a pair of sticks or crutches. His gait was shuffling, for he feared to bend his knees, and in going up a stair, he declared, he frequently fell, from the want of control over the movements of the knees, a statement which was confirmed by the numerous cicatrices on the skin over the joints.

Mr. Lister, knowing that if due care were exercised, the operation might be undertaken with safety to the patient, and hoping at least to render one limb more useful, resolved to try to rectify the condition. Accordingly, on June 1st the patient was placed under the influence of chloroform, and after the skin of the part had been thoroughly cleansed with 1 in 20 carbolic lotion, a longitudinal incision was made on the front of the left limb, beginning at the lower border of the patella and extending upwards for about eight inches in the middle line of the thigh. The skin, fat, and fascia were then dissected up and turned aside, and the anterior borders of the vasti were exposed. The rectus tendon was not recognised, but the pale fibres of the atrophied muscle were found near the upper end of the incision. The upper border of the patella was then defined, and a longitudinal incision, corresponding to the primary one, was carried from it upwards through the fascia and muscular substance connecting the vasti across the front of the thigh. In doing this, the large bursa under the crureus was opened into. An incision was now made transversely from the lateral edge of the patella on either side into the substance of the vastus, and the portions of muscle so marked out were dissected as well as possible from the capsular ligament, and by longitudinal cuts with the knife from the deeper parts of the same muscles. In separating these portions of muscle from their connexions, the knee-joint was necessarily opened at several places. They were now brought into the middle line, and to effect this more easily, a wedge-shaped portion was removed from the mass of tissue representing the rectus and crureus. Their edges were stitched together by sutures of carbolised catgut, and their extremities fastened to the patella, through the medium of its fibrous covering, with the same material. Four counter-openings for drainage were now made at the most dependent parts—viz., where the displaced portions of the vasti muscles had lain, and drainage-tubes were inserted. A few small articular branches were the only arteries which required ligature.

The incision was united, first by two wire-and-button sutures passed deeply through the tissues—"stitches of relaxation,"—and, secondly, the edges were approximated by carbolised silk stitches. At the lower end of the incision a drainage-tube of fine calibre was inserted. The operation was conducted antiseptically, and a large gauze dressing extending to the hip was applied. The limb was then bandaged to a well-padded posterior Gooch's splint.

On the evening of the operation the temperature was 99·8°.

June 2nd (the day after operation).—Patient had passed a good night, and breakfasted with relish. There being considerable serous oozing, the dressing was changed. Temperature: morning, 100°; evening, 101°. Pulse: morning, 104; evening, 92.

3rd.—Dressed. Temperature: morning, 99·2°; evening, 100·4°. Pulse: morning, 104; evening, 86.

4th.—Dressed. Temperature: morning, 100·2°; evening, 100·2°. Pulse: morning, 88; evening, 100.

5th.—He complained of slight uneasiness in the limb. The wound was dressed, and seemed to look well. Temperature: morning, 100°; evening, 100·2°. Pulse: morning, 88; evening, 100.

6th.—There being no discharge visible beyond the dependent edge of the dressing, the limb for the first time was left undisturbed. Temperature: morning, 99·6°; evening, 99·6°. Pulse: morning, 84; evening, 88.

7th.—Dressed. A degree of tension was apparent, and a few of the silk stitches were removed, when the wound gaped slightly at one place. Temperature: morning, 99°. Pulse: morning, 88. The patient seemed a little low, and was ordered a teaspoonful of compound tincture of quinine in a glass of sherry three times a day.

8th.—Dressed. Temperature: morning, 99°; evening, 99·8°. Pulse: morning, 80; evening, 80.

9th.—Dressed. Temperature: morning, 98°; evening, 99·6°. Pulse: morning, 84; evening, 80.

10th.—Not dressed. Temperature: morning, 98·6°; evening, 100°. Pulse: morning, 80; evening, 80.

11th.—Dressed. Temperature: morning, 98·2°; evening, 98·2°. Pulse: morning, 84; evening, 88. At each dressing the tubes were removed, shortened, and cleansed in lotion before being returned.

12th.—Not dressed. Temperature: morning, 99°; evening, 100°. Pulse: morning, 88; evening, 84.

13th.—Dressed. The upper button-stitch was removed. A little pus on the dressing. Temperature: morning, 98·2°; evening, 98·6°.

16th.—Since last note the wound had been dressed on alternate days. The skin seemed somewhat tumid, and one of the buttons of the lower button-suture was depressed below the level of the surrounding skin. A slight blush of redness was manifest in the edges of the wound at its lower part, while the presence of some pus in the deep dressing confirmed the other indications of tension. The button-suture was therefore relaxed.

17th.—Dressed. It was found that the lead-button, which yesterday had been pressing injuriously on the swollen tissues, had produced a superficial slough of the skin exactly corresponding with itself in size and shape. The whole suture was therefore at once removed. The drainage-tube at the lower part of the incision was now unnecessary, the wound having at that point opened up into an ulcer-like sore, and it was accordingly done away with.

20th.—The slough had now extended from its original position as far as the incision, and was about an inch and a quarter in length. The protective covering this slough had a dark stain and a fetid odour. Some bacterial forms could be distinguished with the microscope in the discharge. It was evident that putrefaction had taken place. As the temperature and pulse now remained normal, it was deemed unnecessary to continue registering them.

From this time healing proceeded steadily, but tardily. Towards the end of July, the gauze dressing was abandoned, and a simple dressing of moist boracic lint was substituted for it. It was now discovered that the patient had been in the habit of insinuating his hand under the upper part of the dressings to scratch his thigh, and doubtless atmospheric air had thus gained access to the neighbourhood of the wound, and set up putrefaction.

Aug. 1st.—The slough had now disappeared, leaving a superficial granulating surface of small extent, which was cicatrising round the edges.

Sept. 8th.—The wound had now been practically healed for several weeks, but the patient had been kept in bed with the leg bandaged to a posterior splint, to permit of thorough consolidation of the new textures before movement should be attempted. To-day the splint was removed, and he was allowed to get up a little.

Oct. 23rd.—The patient left the hospital.

The condition of the limb at the date of his discharge was as follows:—The outline of the knee was of almost normal appearance, with the exception of a depressed cicatrix about the size of a penny. The hollow above the patella had disappeared, and the skin here was tense, and covered firm muscle and tendon. The patella could be moved from side to side, but was very much less mobile than before the operation. When the patient lay on his back, and was asked to raise the limb into the air, he did so without difficulty, but it was noticeable that, preliminarily to the raising of the limb, the knee became slightly flexed, say to an angle of 157°, thus contrasting with the condition before operation, when it could only be raised from the bed in a rigidly straight position. Being now requested to bend the knee, he gradually permitted the limb to become flexed till it had reached an angle a little greater than a right angle, say 110°. This was the extreme limit of voluntary flexion. It was possible to increase this limit by force, but that would obviously have been an injudicious and useless proceeding. It was therefore evident that great benefit had resulted from the operation; for whereas the patient had now complete control over the muscles of the knee between the angles of 157° and 110°, it was precisely at the former of these angles that previously to the operation the vasti muscles had been wont to cease their action as extensors, and loss of control over the knee had ensued. So conscious was the patient of this improvement, and the increased safety and ease of progression which it favoured, that he declared that had he been a younger man he would have had no hesitation in asking Mr. Lister to operate on the other leg. As it was he felt that, being old and feeble, he might not have stamina enough to resist another serious operation, and resolved, perhaps wisely, to "let well alone." Before he left hospital a pair of poro-plastic, lateral splints were moulded to the right leg, and made to extend from well up the thigh to a little above the ankle. These were padded, and applied with straps. Their object was to prevent flexion of the knee during walking, and so to preclude the possibility of those sudden falls to which the patient had formerly been liable. A similar pair was made for the left limb, in case they should be of use, but he preferred not to wear them on that limb.

Remark on the above case (for the notes of which I am largely indebted to Mr. J. Stewart, M.B., the clinical clerk) seems almost superfluous. It speaks for itself. The case is a good example of the kind of operation which may be safely undertaken, and the kind of result which may be looked for, under antiseptic means. It may be affirmed without exaggeration that to cut down on a knee, expose the joint, remove the adjoining muscles from their existing connexions, and unite them by an organisable material to their proper place of attachment, is a proceeding which no surgeon would be justified in attempting under any other system but the antiseptic one; while the fact that this was followed in the present case by no injurious effects to the joint, and no greater constitutional disturbance than what is implied in a temporary rise of temperature to 100·2° and a slight loss of appetite, proves that under that system such an operation can be undertaken with a degree of risk which is only to be measured inversely with the care exercised by the surgeon. To those who practise antiseptic surgery the case contains an important lesson—the extreme liability to putrefaction in a person of old and enfeebled tissues, and the almost exaggerated care which must be bestowed on the management of wounds in such an individual, where true antiseptic results are aimed at. It was a happy thing for our patient that the putrefaction which unfortunately did ultimately occur did not take place till nearly three weeks had elapsed after the operation, for by this time the deeper parts of the wound had become consolidated, and the capsule of the joint must have been closed. Had putrefaction occurred immediately after the operation, very disastrous consequences would doubtless have ensued. It must therefore be ever with a feeling of heavy responsibility resting on himself that the surgeon undertakes such an operation.

Edinburgh.

REPORT ON A PECULIAR MOUTH AFFECTION PREVALENT AMONG THE MEN OF THE INDIAN EXPEDITIONARY FORCE.

BY GEORGE YEATES HUNTER,
SURGEON-MAJOR, TWENTY-SIXTH BENGAL NATIVE INFANTRY.

IT is difficult to identify this disease with any of the varieties of stomatitis hitherto described: probably it more resembles stomatitis membranosa, or, in some instances, stomatitis erythematosa, than others, although no false membrane is formed as in the former, and inflammation of the mouth, extending to the bowels, and causing diarrhœa, is not present as in the latter; nor is there salivation, though herpes labialis is not uncommon. Certainly the disease does not resemble stomatitis follicularis, nor, I think, can it be one of the many kinds of stomatitis fungosa, though, were it not for the absence of growth of tissue, I should be inclined to place it under that head; for I believe it to be a disease due to the grain used as food. The chief argument against diseased grain would appear to be the absence of diarrhœa; still, it should be borne in mind that the extension of the disease to the larynx is in favour of its being propagated by a vegetable parasite. The disease clearly is not stomatitis ulcerosa, nor can I trace any likeness to the three or four other kinds treated of; while, with regard to stomatitis syphilitica and stomatitis mercurialis, it is impossible to obtain reliable data, as the statements of natives on such points are not trustworthy. From a tabular statement, carefully prepared by Surgeon Clarkson, in which 83 cases are shown, it would appear that the troops suffered at the rate of 10, and the camp followers at the rate of 15 per cent. The higher rate among the latter may be accounted for on the ground that they have not been, as a rule, so well fed and well cared for a body of men as the sepoys.

Symptoms.—At first slight elevation of the fungiform and filiform papillæ, followed by stripping or peeling off of patches of epithelium, chiefly in the middle of the dorsum of the tongue, until the membrane is almost denuded; meanwhile fissures, mostly longitudinal, taking the direction in which the muscular fibres run, are noticed in nearly one-third of the total number of cases, and in about the same proportion the lips are sore; the labial, gingival, buccal, and palatal mucous membranes are also similarly affected. In half the number of cases the gums show a distinct blue line, or are bluish; and in two-fifths the gums are ulcerated at the point of junction with the teeth, while the teeth are loose. There is no pain in the mouth, neither is there feverishness, and the thermometer indicates no general rise of temperature, although a slight increase in the mouth itself is noted. As the disease of the mouth, fauces, and pharynx advances the laryngeal membrane in most instances becomes implicated; indeed, in the greater number of cases of 15 days' duration more or less hoarseness is present, and uneasiness on either side of the hyoid bone and thyroid cartilage, or pain and swelling in the submaxillary region, is almost invariably observed.

Causes.—Earth, air, and water would seem to be excluded as causes, for as regards all these elements, the disease commencing on board ship, together with there being no account of it as prevalent at Malta, put them out of the question. Doubtless the water, looking at the nature of the soil, is largely impregnated with lime, and it would be well to have it analysed; still this would be too general a cause to assign for a disease affecting about 10 per cent. only of the men, to say nothing of its having made its appearance previous to the use of this water. Again, officers, who breathe the same air, drink the same kind of water, and are encamped on the same soil, are entirely exempt. To my mind the main point worthy of consideration in trying to discover its etiology is the fact that proportionately fourfold more cooking men suffer from the disease than non-cooking; this difference is, in my opinion, very striking. The former have lived in an exceptional manner, and are still doing so, since the cooking man on shore eats meat, vegetables, or fish curry—in short, anything he can get, his diet being of a very varied character; whereas the non-cooking man has lived pretty much as usual, and, as contrasted with the cooking man, has been very much considered; in fact, what might almost seem a disqualification for employing him at all on foreign

service has redounded to his advantage. The fact, however, that he has suffered, though in far less degree, would almost make it conclusive that the disease is due to the grain. In the case of the cooking men, they would necessarily suffer more, not only from anything wrong there may be with the grain *per se*, as to quality, age, &c., or any deleterious admixture it may contain, but also because they are unaccustomed to an exclusively grain diet, or one nearly so.

Diagnosis.—I am disposed to associate this disease either with diseased grain (cattle suffer in a like manner), which, however, I have no means of verifying by microscopic examination, and partly to men, habituated to a dietary in which meat and vegetables largely enter, being suddenly put on one of grain, and otherwise differently rationed, though the absence of diarrhœa certainly militates against the fungus disease theory; or with the irritant lime which is apparently mixed with the rice, with the view probably of preserving it from insects, &c. Perhaps it would not be far from the fact to describe it as a low constitutional form of disease, grafted on the scorbutic diathesis, caused by food rendered improper by age or otherwise, and manifesting itself first at the point of contact, or a local manifestation of a general constitutional taint, in which the probability of local irritation also must not be lost sight of; since with respect to lime, although it is generally used as a "masticatory" with betel nut, yet in large quantity and long continued it affects the mucous membranes, and acts as an irritant poison.

I demur to the term "inflammatory" in reference to this affection, since inflammation, as a rule, implies a sthenic condition, whereas this disease is peculiarly asthenic, and of a distinctly low type. I would call it, in preference, "erythema mucosæ membranæ oris cum vel sine fissuris."

Duration.—The disease, as previously remarked, showed itself before disembarkation in a few cases, and in the remainder, without doubt, the effects were continuously going on in those predisposed through weakness or the scorbutic taint to contract it. It would seem to reach its height in about a fortnight, and then begin to decline; but time will be required to pronounce upon its disposition to recur.

It has shown itself both among the sepoys and followers, and no distinction can be drawn, or could be well anticipated, as they were placed under identical circumstances.

Recommendation.—A more varied diet has been already recommended for the regiment, which, if allowed, might be extended to the followers.

Treatment.—The general treatment has been antiscorbutic and tonic, attending to the primæ viæ, regulating regimen as far as possible, and paying all regard to sanitation and hygiene.

The application of the stick-caustic to the larger fissures, and a weak solution (half a grain to an ounce of distilled water) of lunar caustic to the affected surface generally, or alum wash in very mild cases, comprises the local treatment.

The cases have been treated as out-patients, and the disease is still running on, several cases, at the time of writing, being of two days' duration only.

Meat and vegetables are just sanctioned for the troops, and will be issued twice weekly. This will be a great boon, and doubtless the disease will be stamped out, so far as the sepoys are concerned.

N.B.—Non-cooking men are those whose caste rules do not allow them to cook on board ship.

Malta.

GLEANINGS IN TOXICOLOGY.

BY CHARLES MEYMOTT TIDY, M.B., F.C.S.,
PROFESSOR OF CHEMISTRY AND OF FORENSIC MEDICINE AT THE LONDON HOSPITAL, MEDICAL OFFICER OF HEALTH FOR ISLINGTON, ETC.

THE VIOLET POWDER POISONING CASE.

A NUMBER of children living in one district and dying suddenly with somewhat similar symptoms, their cases were inquired into with great care and in great detail by Mr. Power, of the Local Government Board, to whom belongs the credit of showing that violet powder was the cause of the mischief. The analyses of Dr. Dupré afterwards proved the correctness of Mr. Power's conclusions.

In two cases only were post-mortems and analyses of the viscera conducted, and these two cases I propose recording.

My account will be rendered more clear if I begin by a word or two on the composition of violet powder. Properly, it should be made of corn-flour mixed with a little powdered orris-root, potato-starch (for the sake of economy) being occasionally substituted for the corn-flour. The following two recipes were handed in at the coroner's inquest, which give the composition of the two qualities of violet powder commonly met with in shops, the first being sold at 7*s.* per gross and the second at 6*s.* per gross of boxes, wholesale:—

First quality Violet Powder (sold at 7s. per gross).

Starch powder	28 lb.
Magnesia	1½ lb.
Orris-root	1 lb.
Violet perfume	1 oz.
Essence of roses	5 drops

Second quality Violet Powder (sold at 6s. per gross).

Terra alba (sulphate of lime) ...	14 lb.
Potato-starch	21 lb.
Magnesia	3 lb.
Orris-root	1½ lb.
Violet perfume	1½ oz.
Essence of roses	5 drops

I was directed by Mr. Humphreys, the coroner, to examine a sample of violet powder suspected by Dr. Brown, of Stoke Newington, the medical man in attendance, of having caused the death of the child about which he was then holding an inquiry. The violet powder, on analysis, gave results as follows:—

Arsenious acid	38·5
Starch (potato)	54·8
Magnesia, &c.	6·7
	100·0

The history of the child's case, from the birth to death, as given in evidence by the doctor, mother, and nurse, is briefly as follows:—The child (a female) was born on May 29th, and was described by the nurse as "a very nice healthy child." It was washed, as usual, shortly after birth, and was then dusted all over with the violet powder. Later on in the day the powder was again applied freely "to its private parts." On the second day, the powder, according to the nurse, was altogether applied about four times. On this day she noticed, as soon as she undressed it, very marked redness and inflammation of the skin, and this led her to employ the powder unusually freely, especially over the stomach, where the redness was most noticeable. On the third day the skin was intensely red, and appeared in parts (especially about the navel, the vagina, and the anus) of a yellow and unhealthy tint. Dr. Brown, who was called in at this stage to see the child, and suspected that the violet powder that had been used was contaminated with some irritant poison, advised its discontinuance, and the use of some common starch powder in its place. On the succeeding days the eruption became very much worse, until the skin in certain parts commenced sloughing. On June 7th (that is, on the tenth day of the child's life, and on the sixth day from the last application of the violet powder) the child died from, as Dr. Brown said, exhaustion consequent on the external application of an irritant poison.

The post-mortem was made five days after death. It appears, from Dr. Brown's evidence, that there was nothing very marked in the condition of the viscera. The body was accordingly buried.

At my suggestion, the coroner meantime having referred the case to me, an exhumation of the body was ordered, so that the several viscera might be analysed. This was done on June 26th—that is, nineteen days after death, and twelve days after burial. I was unable personally to form any opinion as to the condition of the viscera, the body being in an advanced state of decomposition. I removed severally, as well as I could—(1) the liver, (2) the stomach and intestines, and (3) the kidneys. On analysis I obtained the following results:—

(1) The liver yielded 1·5 grains of arsenic.
(2) The stomach and intestines yielded 1 grain.
(3) The kidneys yielded distinct traces.

I cut up the remainder of the body, and estimated the

total quantity of arsenic I could obtain by simply boiling in acidulated water. This amounted to about 4 grains. Thus a total of 6·5 grains of arsenic was obtained by analysis.

At the very time Mr. Humphreys was holding the inquest on the above child, he was called upon to institute an inquiry into the cause of the death of another infant who succumbed under similar circumstances. The deceased was attended by Dr. Mallam, of Hackney Wick. The child (a female) was born on June 11th. The violet powder was employed as usual. Within a short time of the application the skin became red, and vomiting and purging set in, which continued until death. Dr. Mallam further reports "an inflammatory condition of the abdomen, groins, and armpits, with induration of the tissue about the navel."

Dr. Mallam, who had detected arsenic in the violet powder used in this case, forwarded me a sample which on analysis gave the following results:—

Arsenious acid	38·3
Starch	55·4
Magnesia &c.	6·3
	100·0

Death occurred on the fourteenth day (June 25th).

Three days after death Dr. Phillips, of Spital-square, made a post-mortem examination, and reports as follows:—"Body black and decomposed; funis not separated; the abdominal parietes very much thickened and adherent to the viscera, with here and there extensive deposits of lymph; rectum very inflamed; the kidneys and spleen very much congested, and the liver slightly congested."

(1) The stomach and intestines, (2) the spleen, (3) the liver, and (4) the kidneys, were forwarded to me for examination in separate jars. The stomach I found intensely inflamed and studded all over with small petechial dots, this state being very characteristic in my experience of death by arsenic. The duodenum was also very congested, parts of the small intestines being similarly affected. On analysis I obtained the following results:—

(1) The stomach and intestines yielded distinct traces of arsenic.

(2) The spleen yielded two grains of arsenic.

(3) The liver yielded about one grain of arsenic.

(4) In the kidney I detected small but distinct traces of its presence.

In this case, therefore, I extracted upwards of three grains of arsenic from the viscera examined.

There are, in conclusion, one or two remarks I should wish to make on these two cases of poisoning (as we are bound to regard them) from the external application of arsenic, and which we have good cause to fear are only two of very many deaths that have resulted from this deplorable, although perfectly accidental, mistake.

1. It is to be noted that in both cases the bodies decomposed rapidly after death. The weather, it is true, was intensely hot at the time; but, apart from this, it is worth recording what I have noted elsewhere, and on another occasion, that when death results from the external application of arsenic the intense eruption consequent thereupon (in these cases described as resulting in actual sloughing of the skin) effects a more rapid, rather than a less rapid, decay. It is generally stated, and it accords with my own experience, that after death by the internal administration of arsenic putrefaction is slow. This rule has, however, its exceptions, and I know of more than one case where putrefaction seemed to be unusually rapid. Summarising these facts, I would say that "delay in putrefaction is an argument in favour of suspecting death from the internal administration of arsenic in suspicious cases, but that rapid putrefaction is in no respect to be considered a conclusive argument against it."

2. It is to be noted that in the first case I have recorded the analysis was not commenced until the infant had been dead for nineteen days, and had been buried for twelve days.

3. The quantity of arsenic found is surprising. I quite admit the force of the question put to me by the solicitor for the defence, whether it was not likely that some of the arsenic found was not derived from the surface of the skin, and got mixed up with the viscera during the post-mortem examination? I admit the possibility, but not the probability.

4. By what means did the arsenic get into the body? That the poison may be absorbed by the sound skin there is abundance of evidence to prove. The absorption, moreover, was, no doubt, rendered infinitely more rapid when the skin became irritated and ulcerated so as to expose open surfaces. But, in addition to these inlets, there can be very little question but that a certain quantity of arsenic must have been inhaled as the powder was being dusted on the body with the common powder-puff, and, moreover, that rectum and vagina (for both these children were female children) aided largely the work of carrying the poison into the general system.

5. Lastly, we may ask, why are these compounds used at all? Thirty-five per cent. of sulphate of lime (for this is admittedly a common adulterant, and for which, in this case, the arsenic was, possibly, substituted) is not an advisable preparation for the nursery. I fear, too often, the use of violet powder is an excuse for want of cleanliness; but, admitting its use (although to a far less extent than is common, for it is only needed in the folds of the skin, and not over the entire surface of the body), ordinary fullers' earth, or, what is even better, common starch-powder pure and simple, perfumed with a few drops of eau-de-cologne (a little scent being a necessity), is all that is wanted, and is infinitely preferable to the numerous concocted preparations for the toilet met with in the shops.

Queen Anne-street, Cavendish-square, W.

CASE OF

DISLOCATION OF THE RIGHT HIP INTO THE ISCHIATIC NOTCH.

BY SURGEON-MAJOR J. E. MOFFATT.

IN January, 1871, when in temporary medical charge of the *employés* of the East Indian Railway at Cawnpore, I was summoned to attend a pointsman who had been run over by a carriage he had been assisting to shunt. On my arrival at the railway station, three hours after the accident, I found a tall, muscular native, of middle age, lying on his back on a bed in the dispensary, without a scratch or bruise visible upon him, but complaining of pain in the right hip and of inability to move the leg of that side. The leg was slightly flexed at the knee, and the whole limb rotated inwards. The toes overlapped those of the other foot. The head of the femur could not be felt. The great trochanter was less prominent than the other, and there was half an inch of shortening.

A brief examination sufficed to satisfy me that there was no fracture of the femur or acetabulum as far as I could make out, and that I had to deal with a simple dislocation of the head of the femur backwards and into the ischiatic notch. The particulars of the accident then elicited from the patient confirmed this diagnosis. He informed me that he and four others were fetching an empty first-class carriage from a siding to be attached to the down train to Calcutta then waiting in the station. He and one man were walking upon the rails, pulling, and three were behind pushing up the empty carriage. As he was walking at a smart pace on the rail next the platform, he stumbled and fell forward upon his face and hands. With great presence of mind he instantly rolled over upon his back into the space between the rail and the platform. The impetus of the carriage was such that the men were unable to check it until nearly half its length had passed over the man on the ground. Unfortunately, in rolling over, he flung himself too far, so that he lay somewhat upon his left side and not fairly upon his back, his head being in the same direction as the carriage was going, and he somehow failed to stretch out his legs. Be that as it may, the lower foot-board caught his right knee just at and below the patella, and pulled the leg and thigh upwards and inwards across the abdomen, in which attitude he was found, and when extricated was so firmly jammed that the carriage had to be lifted up with screw-jacks.

I immediately proceeded to place the patient under chloroform, employing extension and counter-extension in the usual manner, and, clasping my hands round the thigh as high as possible, I pulled outwards to keep the head of the femur clear of the acetabulum. Barely one minute had elapsed before the head of the femur returned to its normal

position with a snap, audible to me and sensible to the men making extension. I contented myself then with tying the man's feet together, and he recovered perfectly without a single drawback, and was at his work as well as ever in two weeks.

The clear and intelligible account of this accident, given above, was fully and independently corroborated by the European officials, who informed me afterwards that they found the man in the space between the platform and the wheels, that his right leg was bent upon and across his belly, and that it was kept in that position by the under surface of the lower foot-board, until the carriage was raised, after which he had no power in it. The height of the footboard from the ground was nineteen inches. This case of backward dislocation of the hip would have remained in oblivion but for the appearance in THE LANCET of Feb. 17th, 1877, of a paper upon "Dislocations of the Thigh," read by Mr. Henry Morris before the Medical and Chirurgical Society, on seeing which this case recurred to me as leading to different conclusions from some of those arrived at by that gentleman—namely, conclusions 4, 5, and 11.

No. 4 asserts that all dislocations of the thigh, unaccompanied by fracture, occur while the limb is abducted. Now, in the above-noted case there was certainly no fracture of the femur nor acetabulum, as evidenced by the speedy recovery without apparatus, and the absence of deformity; and as to the position of the limb during the accident abduction was simply impossible. The facts of the case and the evidence lead irresistibly to the conclusion that it was in a state of flexion and adduction.

No. 5 asserts that posterior dislocations result when flexion and inward rotation accompany abduction. With regard to this statement, I think there could have been no rotation once the knee was caught by the foot-board, and therefore rotation of the limb on its axis must be excluded as an essential element of backward dislocation.

No. 11 asserts that direct dorsal dislocations, or those which are said to occur during adduction, are always the result of immense violence, and are always associated with fracture of the acetabulum, or of the head of the femur, or of both. Now in this case, while there was enormous force applied to the tibial end of the femur, while that bone was being flexed and adducted on a fixed pelvis, no fracture whatever occurred. I do not mean to convey that backward dislocations may not occur through inward rotation and abduction, but it must be conceded that such conditions are not essential, any more than is fracture of the neck of the femur or acetabulum.

Naini Tal, India.

CASE OF

ABSENCE OF THE INTER-AURICULAR SEPTUM, WITHOUT CYANOSIS, IN A MAN AGED FORTY.

BY RICHARD CATON, M.D., M.R.C.P. LOND.,
HON. PHYSICIAN TO THE LIVERPOOL NORTHERN HOSPITAL.

WRITERS on heart disease have long been divided in opinion as to the causes of cyanosis. The fact that a patent foramen ovale or other abnormal communication between venous and arterial channels often coexists with that condition has naturally led to the view that it is due simply to the circulation of mixed arterial and venous blood. This appears indeed, at first sight, a most natural and sufficient explanation, and it has been adopted by many writers of eminence. Other authorities, again, among whom may be mentioned Laennec, Morgagni, Louis, Hall, Peacock, and more particularly Stillé, explain cyanosis otherwise, the last-named writer especially contending that it may exist without any admixture of arterial and venous blood, and also that complete admixture may occur without giving rise to cyanosis.

The following case is interesting as an example of the last-named proposition. In the journals and in the Transactions of various Societies I have met with numerous cases of open foramen ovale in the absence of cyanosis, the opening being in some few instances as large as a shilling. But the case here narrated is more remarkable than any, for the auricles being much dilated, a disc three inches in diameter could be placed in the aperture between them without undue stretching.

August L——, aged forty, was admitted into the Liverpool Northern Hospital on Dec. 10th, 1877, suffering from dyspnœa, œdema of legs, and ascites. Patient is a powerfully-built and muscular man, who has had good health all his life, excepting that three months ago he had an attack like the present one. He has been for twenty years at sea. A fortnight ago he caught a severe cold, which brought on a cough with profuse expectoration, and a week later was followed by dropsy. On admission, patient was somewhat cyanosed, and had much cough and expectoration. Pulse 50, intermittent and unequal; temperature 100°; arteries rigid; cardiac dulness greatly enlarged; sounds normal; veins on left side of neck dilated and pulsating synchronously, with cardiac diastole, and filling from below; lungs resonant on percussion; expiration prolonged; crepitation at both bases, and râles in nearly all other parts; alimentary system normal, excepting that the tongue is slightly furred; urine pale, acid, sp. gr. 1007, no albumen. The treatment consisted in milk diet, the use of a gentle expectorant mixture, and rest in bed. Under this he rapidly improved, cyanosis, œdema, and ascites entirely disappeared, and the râles and crepitation nearly so.

Towards the close of December he had a relapse; temperature went up to 102° F., and he complained of sore-throat, headache, and pain in the back. A little albumen and a few granular casts appeared in the urine. There was also some return of cyanosis and of dyspnœa. In a few days these symptoms again subsided, and he appeared quite well. He was free from cyanosis and dyspnœa; could walk with ease, and ascend the stairs to the top floor of the hospital with little difficulty. Cardiac dulness unaltered; pulse still slow and intermitting. Believing himself quite well, and being determined to return to work, he was discharged on the 18th of January, after being duly cautioned.

The patient was readmitted on the 29th of January, much cyanosed and with great dyspnœa; lungs full of crepitation and râles. On the next day, while attempting to get out of bed, he fell dead on the floor.

Necropsy, twenty-four hours after death.—The pericardium was largely adherent; ventricles, auricles, and appendices were greatly dilated. The pulmonary artery was unusually large, as also were its branches throughout the lungs. All the valves were apparently healthy. No communication existed between the aorta and the pulmonary artery. There was no partition between the auricles; a small fold of endocardium showed the line of demarcation between them, and, as mentioned above, a disc of cardboard three inches in diameter just fitted the orifice. Nothing was noted of importance in the other organs.

Considering the extraordinary size of the aperture between the auricles, and the slow action of the heart, it looks almost as certain that the venous and arterial blood must have mixed as it is that milk and coffee do when poured into a coffee-cup, and yet, under ordinary circumstances, there was no cyanosis and no impairment of muscular and nervous activity.

Liverpool.

EMBOLISM OF THE BRACHIAL ARTERY FOLLOWED BY GANGRENE OF THE HAND AND FOREARM.

BY RICHARD T. GORE, F.R.C.S.

MRS. H——, living about twenty miles from Bath, had a miscarriage at the latter end of November, 1867. When partially recovered, though a uterine discharge still continued, she was exposed to extreme cold at night. Up to Dec. 10th, she had suffered for some days very severe pain in the left hand and forearm. On Dec. 16th, it was found that all pulse in the radial and ulnar arteries had ceased, and the former could be felt at the wrist as a solid cord. Paroxysms of severe pain continued for several days, especially about the elbow. Sensation remained perfect, and there was very little reduction of temperature until Dec. 26th. At that time all pulsation had ceased up to the middle of

the brachial artery, which formed a solid cord, with some thickening at the bend of the elbow. The nails and ends of the fingers now began to have a faint purple tinge; and there were two discoloured patches on the back of the hand. The return of blood by the veins at the bend of the elbow is very tardy. The pulse at the other wrist is about 90, and very feeble. The action of the heart is quite natural; the tongue red, and rather dry. A slight muco-purulent discharge from the uterus continues, but there is not any uterine tenderness. She sleeps fairly in the intervals of pain, which is not continuous.

Dec. 31st.—She is considerably relieved from pain; the hand and fingers are cold, reddish-purple, and shrivelled; the coldness and discolouration extend nearly to the elbow; no pulsation is to be felt in the brachial artery below the margin of the axillary artery, and there very imperfectly. Pulse at the right wrist 120. Tongue red, glazed, and aphthous.

Jan. 9th, 1868.—In this interval she had much improved in health, taking food and stimulants in fair quantity. The pain has nearly ceased. The hand and forearm are dry, with a few blisters about the bend of the elbow, and a faintly-marked line of demarcation just above it.

11th.—I amputated the arm about midway between the elbow and shoulder, making two flaps. The brachial artery and vein were blocked up with solid coagulum. Not any artery needed a ligature, and there was scarcely any oozing from the cut surfaces. The edges of the wound were brought together with wire sutures, and dressed with a strip of lint moistened in tepid water. Immediate union took place by adhesion, and henceforth recovery was rapid and uninterrupted.

The arteries in the hand and forearm were blocked up at all points, and the muscles shrunken, and of a dull purple colour.

No doubt in this interesting case the starting-point of the mischief lay in the congested state of the uterine vessels, accompanied probably by an unduly plastic state of the blood, leading to the formation of a clot and embolism of the brachial artery, forming in the whole a good specimen of dry gangrene, independent of injury.

The patient was under the immediate care of Dr. Bishop, of Calne, to whose diligent care and attention throughout her well-doing was greatly to be attributed.

Bath.

SUBCUTANEOUS INJECTION OF CURARA FOR CHOREA.

BY R. T. WRIGHT, M.D., F.R.C.S.,
SURGEON, BENGAL ARMY.

ATTENTION having been drawn to curara by Mr. Alfred Simson[1] and by Dr. D. Drummond[2], notes of the following case may be of interest.

Mr. S. C——, aged seventy-eight, widower, farmer, of Hopton, Shropshire, a tenant of Viscount Hill, was an object of much local sympathy, on account of his suffering from true chorea for three years, which had resisted all sorts of treatment; so I was asked to see him in consultation. I visited him with Dr. John Lyon and Mr. W. Gill, son of Lord Hill's agent, and found him almost worn out by jactitations so constant and so violent that he was thrown off his bed, unless protected by railings on every side. He could not walk, and his speech was quite unintelligible, except that a few monosyllables, such as "tea," "no," "here," were shouted out with a painful effort. His spirits were very low, he had great difficulty in swallowing, and he could scarcely ever fall asleep without a dose of chloral hydrate, of which he was very fond, as he was quiet only when asleep. Fortunately his appetite was very good and his bowels regular, though he had no teeth and he was always eating sweets. It seems his family is subject to chorea; several relations had it at various times of life, and his mother, who died at the age of eighty-five, is said to have suffered from chorea for several years before her death. He was so restless that it was impossible to ascertain his pulse, respiration, or temperature; his urine on examination was found to be clear, neutral, of sp. gr. 1010, free from albumen or casts, but it threw down a faint cloud of phosphates with heat, which readily dissolved with a little nitric acid.

As curara had been recommended in hydrophobia, I suggested it might be tried in chorea, so solutions of the following strength were injected subcutaneously on the dates specified. Jan. 21st, 1878, one-twentieth of a grain; Jan. 22nd, one-twentieth of a grain; Jan. 26th, one-tenth of a grain; Jan. 28th, two-tenths of a grain; Jan. 31st, four-tenths of a grain.

On Feb. 2nd four-tenths of a grain of curara were injected. Pulse (felt for the first time) 68, regular. The jactitations were now far less violent, and both the patient and his relatives remarked the improvement without any bad effect. Four-tenths of a grain were injected on Feb. 4th, 5th, 6th, 7th, 8th, 9th, and 10th, by which date he was perfectly quiet, able to walk without help, and could sleep at night without chloral. He had no other medicine at all but curara since the subcutaneous injection treatment was begun. Four-tenths of a grain were injected on the 14th and 18th; on the latter date he spoke a sentence, slowly, but plainly, and readily intelligible by listening attentively. On the 19th four-tenths of a grain were injected, the patient being in remarkably good spirits. The same quantity was injected on the 22nd, on which day Mr. C—— put on his spectacles and read his Bible—the first time he had been able to do so for three years.

From the last date he has been kept quiet by injecting four-tenths of a grain of curara twice a week. His speech is still of abnormal character; but he will not submit to the operation more than twice a week, as he has a morbid dread of the pain, and often breaks the nozzle of the syringe by his frantic struggles when the doctor approaches him. His relatives say he always, even when in health, had a morbid dread of pain, never would wash in cold water, and howled piteously at the slightest scratch. He was sent to Matlock at the outset of his treatment to have proper shower-baths, but he would not stay a week, as he dreaded the water.

The preparation used in Mr. C——'s case was by Messrs. Savory and Moore, in the form of discs of gelatine, a quarter of an inch square. It is made of three strengths, in which each disc contains respectively one-hundredth of a grain, one-twentieth of a grain, and one-tenth of a grain, so that it is easy to obtain a solution of any desired strength. A few drops of water are placed in a spoon; then the discs required for use are added, and the fluid is warmed over a lighted taper; stirring, if necessary, to assist solution. It is necessary to clean the syringe with warm water directly after use, as curara is very sticky, and solidifies when cold so rapidly that it is apt to block up the nozzle of the instrument.

Parliament-street, S.W.

[1] THE LANCET, May 25th, 1878, p. 776.
[2] British Medical Journal, June 15th, 1878, p. 857.

EXTRACTION OF STEEL AND IRON FROM THE EYE BY THE MAGNET.

BY W. A. M'KEOWN, M.D.,
SURGEON TO THE ULSTER EYE, EAR, AND THROAT HOSPITAL.

THE following cases will doubtless be of interest, taken in conjunction with that not long ago brought before the Clinical Society of London by Mr. M'Hardy.

Dawson B——, aged twenty-four, smith's helper, applied to me at the hospital on Jan. 16th, 1877. He stated that three days previously his right eye had been wounded by a small piece of metal. I observed that the iris was attached to the lens at the outer part of the pupil by recent lymph, and that there was a limited opacity of the lens. There was a small clear metallic body sticking at the margin of the adherent pupil. I made a small section of the cornea, more peripheral than the pupil, introduced a pair of iridectomy forceps, and seized the body and a little piece of iris; but the body slipped from my grasp, and was gliding out of my reach. Fortunately, I had anticipated such an untoward event, and took care to have a pointed permanent magnet at hand. I introduced it into the wound. The metal was instantly attracted and withdrawn. The patient continued under my observation till the 16th February. The opacity of the lens remained limited to the part wounded. I believe the wound in the capsule was closed by lymph and healed. I have not seen nor heard from the patient since.

BEST COPY AVAILABLE

Moses E——, aged thirty-two, millwright, consulted me at the hospital on November 20th, 1877. He stated that three-quarters of an hour before his visit his right eye had been wounded by a chip of steel from a hammer. I observed a wound a little more than a line long in the ciliary region, just at the corneo-selerotic junction. One end of the wound penetrated the anterior chamber, as shown by the evacuation of the aqueous humour and a slight displacement of iris towards wound. The wound was quite clean, and no foreign body was visible. Media clear. Ophthalmoscope did not disclose presence of foreign body. I put the point of the magnet cautiously into the wound, and at once it proved the presence of metal within the sclerotic by the click and the attraction. By a little patient and careful use of the magnet the metal was brought into the wound, and the end of it exposed so far as to enable me to seize it with forceps. Having caught it, I easily extracted it. The fragment was a thin piece about a line and a half long, one line in width at one end, half a line at the other end. The patient recovered completely, and returned to work on Dec. 10th following.

There can hardly be a doubt that the magnet saved the eye in both cases. In the first case, to have followed the sharp fragment with forceps would probably have inflicted irreparable damage, and, indeed, the body might have got out of the way altogether. In the second case, the metal would probably, but for the magnet, have remained undetected, and have afterwards lighted up destructive inflammation. Even had it been detected, it would not have been possible, but for the magnet, to have extracted it without enlarging the wound, and that is not desirable in any part of the eye, much less in the ciliary region. By the magnet, the diagnosis was established, and the extraction effected in the most delicate way.

Belfast.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

FRACTURE AND SEPARATION OF LAMBDOIDAL SUTURE OF SKULL; LACERATION OF BRAIN, WITH EXTENSIVE HÆMORRHAGE IN RIGHT FRONTAL LOBE; ABSENCE OF SEVERE BRAIN SYMPTOMS; SUPPOSED INTOXICATION; DEATH.

(Under the care of Mr. GEORGE LAWSON.)

THE following case presents two points of interest. First, it illustrates the difficulty that may arise in deciding whether a patient is drunk or dying. On the one hand, intra-hæmorrhage often produces symptoms simulating drunkenness; and, on the other, a drunken man may receive an injury to the head, or be seized with apoplexy; hence it sometimes becomes a nice point in diagnosis to determine in what degree the symptoms are due to brain mischief, and in what to drink. The patient in this case was taken to the police-cell as drunk. He was medically examined, and recovered sufficiently from his apparent drunken semi-consciousness to be able to converse with those about him. After a few hours, however, severe cerebral symptoms came on, and he was transferred to the Middlesex Hospital, where he died on the thirteenth day from severe laceration of the brain-substance, associated with extensive hæmorrhage, and with fracture into the lambdoidal suture. The second point of interest is the remarkable absence of paralytic symptoms, considering the severe laceration of the brain. With the exception of loss of power over the sphincters there was no paralysis whatever. There was considerable rigidity of the extremities, which were maintained in a flexed position.

We are indebted to Mr. Lyell, the surgical registrar of the hospital, for the following notes.

Thomas E——, a young man twenty-five to thirty years of age, was admitted into the Broderip ward on March 13th, 1878, completely insensible, and with the following history. On the previous day (the 12th), at about 1.30 P.M., the patient was said to have fallen from a dung-cart. He was taken to the police-station as drunk, and there the divisional surgeon examined him, and could not find any injury. The patient was able to walk to the station with assistance, and he recovered in a short time from his semi-unconsciousness sufficiently to be able to talk to those about him. At 6 P.M. he was found in his cell insensible and was then taken to the hospital.

On admission he was wholly unconscious, with quiet, regular, non-stertorous respiration. The eyes slightly diverged, and the pupils were small, equal, and not affected by light. The patient opened his eyes and stared if shouted at, but immediately relapsed again. At intervals his arms and legs were seized with a kind of convulsive twitching. At other times he performed voluntary movements, such as scratching himself. His attitude was a flexed one, and the muscles generally were rigid when attempts were made to extend him. The surface of the body was cold. Pulse 60; respiration 22.

Head to be shaved, and ice-bag applied.

He passed a quiet night, and continued next morning in the same insensible condition. He lay on his back, with the knees partially drawn up, and his arms across his body, and resisted attempts to straighten them. He would not take food. The urine had to be drawn off. The bowels acted involuntarily. Pulse 84; temperature 99·8°. Ordered beef-tea and brandy enemata.

On the 15th he still lay quietly on his back, with his eyelids closed, and breathing quietly. He showed no disposition to move, and kept the bedclothes drawn up over him, and at times held the edge of them between his teeth. He occasionally scratched his skin, and could swallow a small amount of fluid nourishment. He would not protrude his tongue when asked. The eyes were still divergent, more especially the right; the left slightly. He still lay in a flexed attitude. The limbs, especially the arms, resisted extenion. He drew away the legs when the soles of the feet were tickled. Pulse 84.

On the 18th he was partly conscious, but still looked dazed and stupid. He opened his mouth when asked to protrude his tongue; told his name correctly, but his utterance was thick and indistinct, and mostly unintelligible. There was no palsy. Did not complain of his head; pupils equal. He now lay extended. Pulse 80, regular; skin cool.

On the 20th he was conscious, and the tongue was clearing. No pain. Answered questions readily.

The 23rd was the brightest and clearest day he had since his admission. In the evening he became very restless, and later on, towards the following morning, sank again into an unconscious state, with heavy, laboured, but non-stertorous breathing.

On the 25th he continued in the same unconscious state. Passed everything under him, and, indeed, had done so during the whole of the time he had been in the hospital except on the 23rd. No rigidity; some slight occasional spontaneous movements of the hands. Respiration laboured, but noiseless. Eyelids drooped; conjugate deviation of eyes to the right, not persistent, but of spasmodic kind. When viewed both globes were seen to be twitched somewhat convulsively to the right, sometimes to the right and downwards, but never apparently to the left. Pulse 156, very small.

He died on the 26th.

Necropsy.—No external bruising, no ecchymosis in orbits. On reflecting the scalp, a thin layer of effused blood was found in the pericranium at the back of the head. No lines of fracture detected externally. On removal of calvaria, the dura mater was seen to be much bulged anteriorly and laterally on the right side. A large quantity of blood-clot was found in the arachnoid cavity in this region, and on removing it the anterior extremity of the right frontal lobe of the cerebrum was seen to be extensively lacerated. The laceration involved more of the inferior than the upper surface, and on section was found to extend into the anterior cornu of the lateral ventricle, the intermediate white matter being replaced by blood-clot. Fluid blood was found in the lateral ventricle. The laceration and softening of the white

matter extended as far back as the anterior extremity of the corpus striatum, which also was slightly destroyed. No other lesion was found in the substance of the brain, but the cortical matter was lacerated almost symmetrically on the inferior aspect of each temporo-sphenoidal lobe. The loss of substance was greater on the right side, where a clot the size of a small walnut covered the anterior extremity of the lobe. On the left side the convolution bounding the lobe internally was the seat of the laceration. On stripping off the dura mater from the base of the skull, several small fissures were seen in the inner table of the parietal and occipital bones on each side, running off from the lambdoid suture. This suture was also slightly separated, and its line readily traced by a small quantity of blood effused into it. The vessels at the base of the brain were slightly thickened. THORAX: Both lungs were more or less firmly adherent, and over the lower part of the left lung was some recent lymph. The lower lobe of this lung was partially consolidated, the consolidated mass being of small size, and presenting characters of red and grey hepatisation. Both lungs were intensely engorged with blood. The viscera of the abdomen presented no special points of interest.

CENTRAL LONDON SICK ASYLUM, CLEVELAND-STREET.

INJURY TO THE SPINE; STONE IN BLADDER; LITHOTOMY; RECOVERY.

(Under the care of Dr. LEDIARD.)

J. W——, aged thirty-four, a baker, was admitted on Oct. 26th, 1877. He was born in India of English parents, and joined the army there in 1857. In June, 1863, when in the riding-school, the horse on which he was mounted reared and threw him on his back, injuring the lower part of his spine. Numbness of his legs ensued, and he was unable to walk for nine years. He was invalided for paraplegia, and came to England in 1869. In 1871 he was cut for stone in a London hospital. The wound did not heal well, and it was ten months before the water all came the right way, and at this time he could not get about much, and had to use crutches. Subsequently he regained power over his legs considerably, walking very fairly without any assistance, and employed himself at baking, but he always wore a urine bag for incontinence.

On admission he stated that he had passed blood and slime with his water for five months, and had had pain and difficulty in micturition, together with sudden stoppages of water, and pain at end of penis. A stone was detected in the bladder, but it did not give a sharp clear ring. The urine contained a little albumen, pus, and ropy mucus, and was alkaline. Two or three years before he used to pass instruments.

On Oct. 29th he was put under chloroform, the bladder was injected with warm water, and lithotomy was performed through the scar of the previous operation. The stone crumbled away when grasped by the forceps, and the nucleus that was withdrawn was found to consist of about an inch of gum-elastic catheter, which was encrusted with phosphatic deposit. There was some free hæmorrhage from the deep part of the wound; a lithotomy tube and petticoat was inserted, and the wound plugged for twenty-four hours. When removed, all hæmorrhage had ceased.

On Nov. 1st the water began to pass by the urethra, but the wound did not perfectly close until Nov. 29th. The bowels acted on the eighth day without pain.

He admitted that when at Plymouth, three years before, he allowed a brother baker to pass an instrument, and he thinks that the catheter may have been broken off in the bladder at that time.

When he was up and about, it was found that the incontinence of urine was unaltered, but the water remained clear and passed without pain. He could walk fairly well, but there was some stiffness about the hips, and he walked from the knees rather. He was provided with a new urine bag, and returned to his work looking well in all respects.

Dr. Lediard said that this was the second case he had cut for stone after injury to the spine. The first case (partial paraplegia) was recorded in THE LANCET for April, 1875. With a degree of paralysis of the bladder lithotomy is, perhaps, a more satisfactory operation than crushing, but the case above recorded does not exactly resemble the former one, inasmuch as in the latter a foreign body occasioned the calculus-formation.

BOOTLE BOROUGH HOSPITAL.

CASE OF POPLITEAL ANEURISM, PROBABLY CURED BY THE UNINTENTIONAL DETACHMENT OF A CLOT DURING THE EXAMINATION OR DURING THE MOVEMENT OF THE PATIENT.

(Under the care of Dr. C. SWABY-SMITH.)

FOR the following notes we are indebted to Mr. C. J. Devis, late house-surgeon.

Patrick M'K——, a labourer, aged thirty-three, married, sought on May 6th, 1878, relief for pains in his knee and leg. Without having sustained any injury whatever, either direct or indirect, three weeks ago, whilst going to work in the morning, he found that he had some soreness at the back of the left knee and leg. To this he paid very little attention for three or four days, at the end of which time the soreness had so much increased that he examined his leg, and found that he had a lump in the ham as large as a hen's egg, and which he noticed "beat." During the following week the pain became very severe, and was accompanied by pains shooting down the calf and by cramps, these symptoms being much increased while standing. He noticed also that his left leg was swollen and hard. The lump was increasing in size, and the pain and other symptoms were getting so bad that he could get no sleep, and was unable to straighten his leg. He had always been healthy, and had never had venereal disease. There was no history of rheumatism or gout. He had not been strictly sober.

He was first seen at home on May 6th, when an aneurismal tumour the size of a small orange was found in the left popliteal space, immediately over the articulation of the knee-joint; it was elastic and strongly pulsating, presenting all the signs of popliteal aneurism. The limb below was firm, and marbled with distended superficial veins. The tibial arteries, both anterior and posterior, were pulsating. He was sent to the hospital, a distance of about a quarter of a mile, where he was recommended to become an in-patient, an Esmarch bandage being proposed as the appropriate means of treatment. Unwilling to enter the hospital for a few days, he was allowed to go home again. He had therefore walked to and from the hospital, and had submitted to three several examinations, in none of which had any undue violence been used. He did not return for admission until the evening of the 10th, four days after the first interview.

On May 11th it was found that the pulsation in the tumour had entirely ceased, the latter being smaller and considerably firmer. There was not the slightest evidence of pulsation in the tibial vessels, nor of development of collateral vessels. The limb below the knee was obviously larger and firmer than its fellow, the enlarged veins being more perceptible than before. The temperature of the limb was decidedly lowered to the feel; the patient complained of his foot being cold. Heart-sounds healthy. The limb having been wrapped in cotton-wool and elevated, the patient was ordered to keep his bed entirely.

On May 14th the tumour was smaller and firmer; still of a lower temperature; no pulsation in the aneurism, or the vessels below; a faint pulsation perceptible in a vessel situated over the internal condyle, and another, still less definite, coursing longitudinally over the middle of the tumour; veins still enlarged; leg not so hard.

On the 25th the tumour was obviously smaller; there was no pain in the limb, nor had there been since admission; collateral vessels much more developed; no pulsation in the tibials; foot still of a lower temperature.

On June 1st, the improvement having continued, he sought his discharge in order to resume his occupation, since which time nothing more has been heard of him.

CARMICHAEL SCHOOL OF MEDICINE, DUBLIN.—The proprietors of this institution have obtained new premises adjacent to the Ledwich School of Medicine, and several changes in the lecturing staff of the school will probably take place.

ABSTRACT OF THREE LECTURES

ON THE POSITIVE IN REMEDIAL ART.

Delivered before the Faculty of Physicians and Surgeons of Glasgow in the Session 1878.

BY B. W. RICHARDSON, M.D., LL.D., F.R.S.

(Continued from p. 228.)

IS POSITIVE TREATMENT OBTAINABLE?

THE question then which I propound is the plain question, Are we to try to obtain a positive system of treatment, or are we to admit there is no such attainable thing? I think we are by duty bound to try, and I believe that the thing is attainable.

I qualify, however, this answer at once by the admission that the task before us is stupendous, and must be accomplished by very slow degrees. We have not so much to learn as we have to unlearn; not so much to make up as we have to give up, the hardest of all scholastic exercises, since there is nothing so hard as to forsake what has been long cherished.

Hardest of all is it to forsake that which has been enforced by what is called experience. We harp on experience. We tell our youths, as we teach them, that we teach by experience. We tell our youths that they have the advantage of our experience, and we hold out to them that their reputation and skill must rest on their experience. Supposing the experience to be based on a right method, then is the teaching sound as it can be. But supposing the experience to be based on a wrong method, then it is most at fault because it is backed by experience, and because a man may therefore nurse an error and cherish it from the beginning to the end of his career.

Let me give two illustrations bearing on this point. In the last century, France, and, indeed, I may say, medicine everywhere, produced few finer observers of disease and treatment than Chomel. In the year 1746 there occurred in the latter months of the year, an epidemic of a particular form of sore-throat amongst the young children of Paris. Chomel wrote a description of this affection, noting specially its fearful mortality. From one case, in which there was recovery, we gather from the symptoms he describes—an efflorescence of the skin and dropsy as a subsequent condition,—that the epidemic was scarlet fever. The experience of that day led the physicians to treat this epidemic disease by copious bloodletting. The patients were bled a first time, and if they became convulsed they were bled again and again. The record of mortality is terrible; but it was not purely from the disease, it was also from the assumed remedy. What here was experience? I note this as an extreme evidence of experience false and fatal. In an opposite line of treatment, the Brunonian system of stimulation was another form of error, and in our time this false system, revived and practised, has been seen by many of us in all its evil. I was called once to a sinking man. When I reached his bedside he was said to be in the delirium of death, and the minister of religion was waiting to replace the physician. As I leaned over the muttering, prostrate body, the hand of it made a feeble grasp at my beard, and the lips, with a sickly smile, said, "Nice beard." A dying man this? No, cold though he was, and prostrate, he was not a dying man. He was a man dead drunk; nothing more. A pint of brandy, administered in six hours by the direction of medical experience, had done what the disease would never have done, and would, if it had been continued, soon have caused death. But the man, relieved from the remedy, and his animal warmth sustained, recovered, like the fortunate patient of Chomel, in spite of the treatment. What here was the experience that led to an all but fatal result from over-stimulation?

The moral I draw from cases such as these is, that the mode on which we have hitherto been progressing, and which is based on individual experience, is not likely to lead to positive results in the application of remedies. The positive must come in another way altogether.

DEFINITION OF THE POSITIVE.

I am prepared to be met by the question, What constitutes the positive in remedial art? How are we to be sure when we have got a positive remedy or means of cure?

The answer to this question, in the strictest sense, is plainness itself. We have a positive remedy when we can all agree upon its precise value, and when we can all define, say in a court of justice, or in any other place where a definition can be made absolute, the course of action of the remedy, and when we can remember every detail of its action, whether we are observing the action or are not observing it. Anything short of this is not positive as a part of remedial skill. When two men of equal knowledge, after fair trial of a presumed remedy, differ so far that one of them shall say that the remedy in his hands is perfect, the other that the remedy in his hands is useless, then the evidence is certain that the remedy stands out of the positive list.

I am not speaking now of the best remedies of a positive kind; I am only speaking of positive action. A remedy may be positive in effect and useful in effect, and of the right kind, and yet, from some action of it, it may not be perfect. Chloroform, for the purpose for which we use it—that is to say, for the purpose of causing insensibility to pain—is a positive remedy. We can all use it alike, and we should receive as the most exceptional piece of information the statement of any man who said he could not use it for the purpose of producing anæsthesia. At the same time it is not a perfect positive remedy, because, convenient as it is, it sometimes does more than we want it to do. It may cause vomiting, it may cause convulsions, it may stop the heart. These phenomena have nothing to do with its positive action as an anæsthetic. They are apart from its anæsthetic action; so, although it is a positive agent, it is not perfect. It is, however, for the purpose of anæsthesia, a positive remedy. It will do what we expect and want. A man need be neither an allopath nor a homœopath to use it for its purpose. We do not want the patient to tell us a word about his own sensations in respect to the effects of chloroform. We see all the phenomena for ourselves. When we have once seen the phenomena we can recall them with our eyes shut. They are precisely before us like a chemical experiment. We are sure the phenomena will recur, however often we may call for them, and although it may be true that we would willingly dispense with certain of the phenomena if we could, we hold by what we have so far obtained as definite, and therefore reliable, improvable and yet at the same time positive.

If we could bring all remedial art even to this imperfect level, all systems resting on mere dogmatic argument and individual experience would naturally disappear. We should be the trained ministers of a fixed art. And this is what I venture to define as the positive in remedial art, for which we should strive.

I do not think, in striving after this perfection, we ought ever to use the word "cure." That is a word pretentious and meaningless. Our object, for example, in administering chloroform, is to place the patient in such a physical state that he cannot feel pain. Our object in administering any other remedy should be to place the patient in a condition in which he shall not experience some other condition that is hurtful; in which he shall not burn so rapidly if he be the victim of fever; in which he shall not be tetanically convulsed if he be the victim of tetanus; in which he shall not die if he be the subject of asphyxia. In all cases the object should be to place the patient as far as is possible in such a condition that he cannot die.

METHODS FOR DETERMINING THE ACTION OF MEDICINES.

The observation as to the true meaning of the application of remedies leads me to remark on the mode of determining action. A study of this part of my subject, extending over many years of experimental as well as practical work, convinces me that no advance can be made that is of any lasting value so long as much importance is attached to subjective evidence in respect to action. Up to the present time, subjective evidence has played a leading part, and, according to one system of research, it is placed first and alone in value. There is a certain limited degree to which subjective evidence can be trusted, as when a person tells you that acute pain is immediately allayed or removed by something remedial that has been carried out. But the evidence extends very little beyond this, and when it is used to prove anything less definite it is open to the most serious error.

The facts of evidence on which remedies should be estimated are objective as a rule, subjective as an exception. To see that atropine dilates the pupil, that various vapours produce sleep when they are inhaled, and such like, are the phenomena and the evidences of effect on which we can alone

rely; nor can we rely on these until we can make them so demonstrable that everyone can ensure their repetition.

In simple terms, it is necessary to take the influence of the mind of the subject out of every observation that is made in relation to the action of a remedy upon him before the physiological influence can possibly be deduced.

I have placed pain as an index from which a subjective part of evidence might sometimes be drawn. I think it necessary, however, to guard myself even on this point. There is such a wide distinction in respect to the pain felt by different persons, and such a difference in the same person at different times in regard to bearing pain, that it is most difficult to define even pain as a symptom in respect of degree. In the performance of local anæsthesia, in which I have had much practice, I often find that a difference of success may be ensured or not ensured, in almost any case, according to the circumstance, whether or not the person being operated upon can or cannot see the operative procedure. All small operations performed out of the sight of the patient, and which are so out of sight that he cannot see them if he would, are easily carried on under local anæsthesia; while other operations really less painful can hardly be permitted under the same process. Upon this fact depends so much of the discrepancy of opinion in relation to the local anæsthetic process. I removed once a tumour from a nervous lady, but in order that her attention might be kept apart from the operation, I encouraged her to keep her eyes fixed solely on a rosary which she held, and to let her mind continue in close attention to her devotions. In perfect silence that operation, which was tedious enough, was carried out without a single expression of pain on the part of the patient, and with the statement afterwards that she had felt nothing whatever except at first an extreme cold. I did a smaller operation of a similar kind on another lady whom I could not keep at rest, and although the insensibility produced was deeper, and the operation much more quickly performed, she was calling out with pain all the time, and declared afterwards she felt at every step of the operation. In another case I produced local anæsthesia while the late Sir William Fergusson removed a small loose tumour from the ball of the thumb of a clergyman. This patient gave evidence, as it seemed to us, of the acutest suffering, and positively fainted while the sutures were being inserted, towards the close of the operation; but when he had recovered from his faintness, and I expressed my sorrow that he had felt the operation so acutely, he affirmed, and has ever since continued to affirm, that he never felt the slightest pain, and that his calling out and faintness were simply and solely the effects of scare or fear.

It is, then, only when we exclude the subjective causes of error, and are ready to receive objective evidence as the basis of sound research, that we can progress at all. Having taken this decisive step, we can first look around and see what agents we have at our command whereby we can systematically and apart from the will of the subject interfere with the physiological states of his body in a definite manner; and, secondly, we can ask whether by such interference we may do any good; whether our interference is scientifically warrantable for effecting what would not be effected if nothing were done.

The terms employed by the ancients lead us to discover that they had, in a rude way, correct notions as to the action of remedies by physiological interference. They classified their remedies on fair physiological grounds. They believed themselves to be in the possession of a series of remedies, which caused free secretions from the glands of the body—aperients, diuretics, emmenagogues, expectorants, diaphoretics, cholagogues. They believed themselves possessed of remedies which quickened or which depressed the circulation—stimulants and sedatives. They believed themselves possessed of agents that overcome muscular tonicity—antispasmodics. They believed themselves possessed of agents which repress secretion—astringents. They believed themselves possessed of agents that relieve pain—hypnotics; and which produce sleep—narcotics. They believed themselves possessed of agents which reduce fever—febrifuges; and, after the days of Stahl, antiphlogistics. They believed they held in their hands remedies that would soften hardened structures—emollients. They had the most confirmed belief that they possessed agents which, over and above food and drink, supplied power or force—tonics. Physiologically there is not a great deal to revise in the enumeration of these powerful agencies. The ancients without any doubt had them all, except perhaps the last, and they knew how to use them so as to produce objective effects. The errors they fell into consisted, (*a*) in using their remedies too freely; (*b*) in using them as if they were always called for; (*c*) in using them without inquiring whether the natural functions would not return without them; (*d*) in using them sometimes at random, without inquiring what precisely was the natural function that was out of gear, and that, as a consequence, required to be directed back to its normal duty.

Objectivism pushed to an extreme was the error of old. As a basis it was correct; as a practice it was made too exclusive. It was through this error that that pure system of subjectivism called homœopathy found support. That system did its "proving" on the delusive method of inquiring after effects through the expression of the subject. What he felt was put down as the action of the agent. The imagining was the physiology, and as that allowed the disease for which the negative agent was administered to take its course without harm, the recovery in all cases, when recovery took place, was traced to the negative as if it were an affirmative fact. The disease did not get well—it was "cured." The idea of curing was, in fact, a fatal error in both the objective and subjective methods of treatment. In both it continues, but in the subjective far more now than in the objective school. In the subjective school the idealised dogma is a superstition, admirable for the propagandist. In the objective school dogma is giving way so hastily to doubt that the danger is of too great yielding of what are often positive lines of treatment, perfectly reliable, and admitting of being formularised into a series which all practitioners may safely and faithfully follow.

(To be continued.)

BORACIC ACID IN THE TREATMENT OF CHOLERA.

To the Editor of THE LANCET.

SIR,—Will you allow me to draw the notice of the profession to the value of boracic acid in the treatment of cholera? It is with considerable diffidence that I venture to write on a subject such as the treatment of cholera (which has so often been discussed, and with such poor results as regards the various remedies which have hitherto been recommended), feeling, as I do, that any new remedies or specifics must of necessity be looked on with distrust and incredulity.

I will not attempt here to explain the theory on which the use of this drug is based, or the grounds on which I was led to resort to its use, but will simply state that having had considerable experience in the treatment of this fatal malady in the course of numerous and extensive epidemics in Burmah and Southern India, and having employed all the various treatments which have had any claim to success with very poor results (the most successful even only yielding a percentage of from 45 to 50 recoveries), I was induced to consider whether any more efficacious remedy could not be resorted to. About this period the properties of boracic acid had recently been made public, and I determined to try its effects. The pure acid not being readily procurable, the biborate of soda was at first employed, with marked benefit, the percentage of recoveries rising from 70 to 75 per cent. Subsequently the pure acid was employed in ten-grain doses every two hours, combined with sodæ bibor., or sodæ bicarb., under which treatment every case recovered.

It was my intention to collect a large number of cases with a view to supplying statistics, but my health rendered a precipitate return to Europe imperative. Having, however, heard of the treatment being employed, as introduced by myself, by a professional friend to whom I had communicated it, in a recent epidemic with very favourable results, every case in which he resorted to it having recovered, I now venture to bring the treatment under notice, in the hope that it may prove as successful in the hands of others as it has done in my own. I would add a few notes with regard to the effects of the internal administration of the drug in this disease, but fear to prolong this communication. I may, however, say that in no case were any signs of irritation or ill effects observed; and that in all of them the renal secretion was re-established with much greater facility than under any other mode of treatment.—I remain, Sir, yours obediently,

W. J. BUTLER,
Surgeon Mad. Med. Service.

August, 1878.

THE LANCET.

LONDON: SATURDAY, AUGUST 24, 1878.

A GREAT deal has been attempted by the Legislature in the course of the session just closed, but comparatively speaking there is little accomplished that calls for special notice at our hands. The great Eastern question has crowded out measures, good, bad, and indifferent; and we have little else to do than to run over the list, and, one by one, record massacres. The Factory and Workshops Act passed at a comparatively early period of the session, and will undoubtedly be an eminently useful measure. Its success was almost assured last year, and its provisions were fully explained in THE LANCET of June 2nd, 1877. The Contagious Diseases (Animals) Act, noticed in another column, has, after a very fierce contest, become law; and though it does not concern us to discuss veterinary questions, bad or costly food of any kind necessary for the proper maintenance of health, means a descent from the normal standard of health, and thus a weakening of the barriers that are put up and maintained with a view to the prevention of disease. These Acts were pointedly alluded to in Her Majesty's speech, as was also the Public Health (Ireland) Act, a measure of consolidation analogous to the Public Health Act, 1875, and, as we hope, "well calculated to promote the important object at which it aims." Meanwhile, the Government have managed to introduce, and bring quietly to maturity, a goodly list of Provisional Orders under the Artisans' Dwellings Act. Sir JOHN LUBBOCK has pushed through his Dental Practitioners Bill, and Mr. ALEXANDER BROWN his Public Health (1875) Amendment Bill, to which we have several times referred in the course of the session.

But Her Majesty's ministers have to plead guilty to a formidable list of failures, for which the Eastern question and the Obstructives must, we suppose, be held responsible. The Habitual Drunkards Bill, introduced by Dr. CAMERON, obtained a second reading, and, in an average session, might, with such considerable alterations as were needed, have become law. The Army Medical Department might probably have been made the subject of a Bill had time permitted, for the condition of the service just now is most unsatisfactory, and the Committee that, as it appears, has only just completed its labours, ought to have been called together earlier. We may ask parenthetically, what would have happened if, instead of Cyprus and the Treaty of Berlin, we were at the present time engaged in a continental campaign? Any fair prospect of direct sanitary legislation for seamen (as apart from ships) seems hopeless. The subject has been discussed in three years successively, and the only cheering aspect of affairs is the removal of one political chief of the Board of Trade, and the substitution of a successor who, if willing to learn the wants of our sailors, is perfectly competent to do so, and to take sensible action on the knowledge gained. It must long ago have been patent to all interested in nautical matters that no Plimsollian or any other line of action would make ships really seaworthy unless the crews that man them were not only competent, but physically fit men.

Among the numerous measures "dropped," delayed, or withdrawn, are three so-called Medical Act Amendment Bills, the most important of which was of course that of the Government, introduced by the Lord President, in the House of Lords. This Bill provided for the registration of foreign and colonial degrees. It gave power to the Medical Council to approve schemes for the examination and registration of midwives, and for the examination and registration of dentists. These might be said to be its chief provisions. There were two prime objects of medical reform—the creation of a complete examining board for each division of the kingdom, and the reconstruction of the Medical Council. With these great objects the Bill dealt most disappointingly. The one-portal examination was, in the first form of the Lord President's Bill, simply permitted. As the permissive principle had been embodied in the Medical Act of 1858, and had been entirely inoperative in two out of three divisions of the kingdom, it was a curious sight to see a strong Government bringing in a Bill which did not compel the reluctant bodies to do that which they had failed to accomplish. The omission was too great an outrage upon public and professional feeling. And the Duke wisely supplied the defect and introduced clauses compelling a conjunction of the medical bodies for the formation of an examining board in each division of the kingdom. From an early period it was clear that the passage of the Bill would be greatly jeopardised if some concession were not made to the universal feeling of the profession in favour of a change in the composition of the Medical Council; but the Duke was unbending, and the Bill was wrecked. Mr. CHILDERS and others brought in a Bill which sought to accomplish the object by providing for the introduction of six direct representatives of the profession into the Council; but the late period of the session and the foregone conclusion of the Lord President not to deal with this question this year, made an attempt to pass the Bill hopeless. Dr. LUSH proposed a measure to amend the penal clauses of the Medical Act and to provide for the recognition of foreign and colonial degrees; but this Bill, like others, did not come on for debate.

Among the Innocents massacred are a Vaccination Law Bill, relating chiefly to penalties, introduced by Mr. PEASE; the Sale of Food and Drugs Act (1875) Amendment Bill, for which Mr. ANDERSON was sponsor; a measure brought in by Mr. MARTEN relating to interments under the provisions of the Public Health Act; and Sir WILFRID LAWSON'S perennial Permissive Bill. We rejoice to find among the list of the slain, a crude and ill-advised measure called the Medical Officers' Qualifications Bill, for which Mr. ERRINGTON was responsible; and Sir HARCOURT JOHNSTONE'S Contagious Diseases Acts Repeal Bill, which, as usual, did not even advance to a second reading, the majority against it increasing year by year. A Bill "to consolidate and amend the law relating to coroners," was brought in by the Home Secretary and the law officers of the Crown, on the 13th inst., in order that it might be referred at once to a

Select Committee, and its provisions are sufficiently important to claim attention at our hands very shortly.

Our readers will probably agree that the retrospect of the session just ended is, from a professional point of view, not wholly satisfactory.

A STRANGE incident in the history of scientific doctrine is furnished by the last work of CLAUDE BERNARD. His latest researches, according to apparently indubitable evidence, led him to the conclusion that the very alphabet of the opinions which have so largely been built up by the labours of PASTEUR is erroneous. Among the papers left by BERNARD, there was found by his assistant, M. D'ARSONVAL, the following brief and not very intelligible note, dated St. Julien, October 20th, 1877, and which has been published in the *Revue Scientifique*. "Theory of alcoholic fermentation. The theory is destroyed. (1) It is not life without air (*ce n'est pas la vie sans air*), for in air, as when kept from all contact with air, alcohol forms without yeast. (2) The ferment does not come from external germs, for in the aplasmic or infecund juices ('verjus' and 'jus pourris') the ferment does not develop although sugar is added to them. If the ferment is also added, then they undergo fermentation. (3) Alcohol is formed by a soluble ferment apart from life in the ripening or decomposing fruits; there is then decomposition of the fruits, and not a vital synthesis of yeast or vegetation. The air is absolutely necessary for this alcoholic decomposition. (4) The soluble ferment is found in the juice from fruit ('jus pourri'); alcohol continues to form and increase in it. With an infusion of old yeast, its demonstration becomes yet easier. (5) There is in fermentation two conditions to study—(*a*) decomposition, (*b*) morphological synthesis."

The following explanation, by M. BERTHELLOT, preceded this remarkable memorandum. "When CLAUDE BERNARD was removed from science, his genius was in its full force, and his spirit of investigation had undergone no diminution. During some months he had undertaken a new series of researches on alcoholic fermentation, and he announced to his friends and pupils that he believed he had made discoveries which would modify considerably current theories. Unhappily, death surprised him before he could announce the secret; when he wished to do so, it was too late. 'It is in my head,' he said to M. D'ARSONVAL, 'it is in my head, but I am too tired to explain it to you.' CLAUDE BERNARD was not accustomed to write the details of his experiments until he had arrived at definite results. Hence at his death everything led his friends to believe that these latest researches were entirely lost, when the autograph notes were found carefully concealed. They are laboratory notes, describing in a summary form the observations M. BERNARD had made in October, 1877, on his estate at St. Julien, near Villefranche, at the time of the vintage. The results are presented in too abridged a form to constitute a rigorous demonstration, as is often the case with the notes of discoverers; a portion of their opinions and of their works—often the most decisive portion—remains reserved in their mind until the final revision. CLAUDE BERNARD had pursued his experiments at the College of France during November and December, but no note relative to these researches has been discovered. All that we know is that his declarations a few hours before his death agreed with the note of St. Julien. Such being the state of affairs, several friends and pupils of CLAUDE BERNARD have thought it would be to the interest of science to preserve the traces of the last occupation of this great mind, incomplete as they have been left. They show at least how he intended to attack the problem, and by what paths he looked for a solution."

Their publication formed the subject of a communication to the Académie des Sciences by M. PASTEUR, who expressed his very natural surprise that M. BERNARD, so frank and open, had conversed almost weekly with the speaker on the subject of fermentation, had sat by his side at the Academy during November and December, and had all the while possessed convincing proofs that he (M. PASTEUR) was entirely in error, yet did not make the slightest allusion to them. The existence of these notes, and the enormous disproportion between the facts mentioned and the conclusions drawn from them, led M. PASTEUR to suggest a very different explanation—namely, that the notes were intended to sketch out a plan of work, by taking PASTEUR as in error on every point, to institute experiments to establish or to refute the supposition. Was not this the explanation of the silence that M. BERNARD had maintained regarding the work, even towards those of his *confrères* who were the most interested in the subject? But this was incompatible with the statement that M. BERNARD was reported to have made to his friends shortly before his death regarding the results he had attained—a statement which M. PASTEUR accordingly stigmatised as an "*on dit*" on which little reliance could be placed. If, he added, in spite of all reasoning, this was to be accepted as a true manifesto against his researches, then he would assert freely that M. BERNARD was mistaken, that all the experiments he had mentioned were doubtful and uncertain, and those which were exact were erroneously interpreted. However, in view of the respect due to so great a mind, and to that which M. BERNARD had written even in the silence of the laboratory, M. PASTEUR announced his intention of reviewing the conclusions experimentally, and of placing himself in the exact current of the ideas and experiments of M. BERNARD, and he invited the friends and admirers of the late Professor to do the same.

OUR national Poor-law system, in spite of inherent defects of organisation and detail, affords legitimate ground for national pride. The system, however, involves responsibilities which, as they are unavoidable, it is desirable and even necessary should be kept in public view. None of the responsibilities connected with our Poor-law system demand more thoughtful and intelligent consideration than the care, treatment, and training of about thirty-five thousand pauper children of England and Wales who are in receipt of in-door relief as inmates of workhouse and district pauper schools. The systematic attempt in recent years to reduce the amount of out-door poor-relief by the application of what is called the house-test has tended considerably to swell the number of in-door paupers, and necessarily of in-door pauper children. Any facts, therefore, that throw light upon the results of the treatment of this large number of English in-door

pauper children have a well-defined value both for Poor-law guardians upon whom the responsibility primarily falls, and for the public which finds the money and is not free from responsibility as to its expenditure.

On July 20th and 27th we published a careful examination of the mortality statistics of sixteen metropolitan pauper schools during the three years 1875, 1876, and 1877. These schools contained during the three years an average number of 8807 inmates, affording a trustworthy basis for estimating the health-condition of these children, which is far from being the least important of the responsibilities involved in their care.

Few will venture to question the importance of trustworthy information as to the health of children in pauper schools, whether regarded as a question of Poor-law administration or as an interesting branch of vital statistics. Very little of such information on the subject is, however, available; and the difficulties in the way of estimating the sanitary condition of the children in those schools are unnecessarily great. It is possible that superintendents and medical officers make annual reports to the managers, but such returns, if presented, are not generally available; and the reports of the Local Government Board make no reference to the health or mortality statistics of these children. The statistics recently published in these columns were prepared with a view to supply, to some extent, the want of information on the subject, and they dealt with the rate of mortality during the three years among the 26,421 years of life under observation within that period. The majority of children in pauper schools are aged between three and fifteen years, although a small proportion exceed both those limits. The life-table rate of mortality among English children at these ages is 9·8 per 1000, but, having due regard to the proportion living at each year of age in sixteen metropolitan pauper schools, the *normal* rate does not exceed 8·1 per 1000. The annual death-rate in these sixteen schools, however, during the three years averaged 12·8 per 1000—exceeding the normal rate of mortality by no less than 58 per cent. The rate in these schools was equal to 12·0 in 1875, 13·3 in 1876, and 12·9 in 1877—a sufficient proof that the causes of the excessive mortality among these children are pretty constant; it is moreover excessive whether compared with the rates prevailing among children at similar ages in England and Wales generally, in London, or in the east districts of London, where the population consists mainly of the poorest of the working classes.

Among the sixteen metropolitan pauper schools dealt with in our inquiry the rates of mortality showed contrasts only second in importance to the marked excess in the rate among the aggregate number of inmates. The lowest annual rates were 2·5 and 4·5 per 1000 in the Westminster and North Surrey schools; while the rates ranged upwards to 19·6, 20·5, and 42·4 respectively in the Forest Gate, West London, and Marylebone schools. On two grounds, therefore, further information bearing on the health and mortality of children in pauper schools is imperatively called for. Not only does the death-rate among these nearly nine thousand children (based upon three years' observations) exceed the rate among children of the same ages outside these schools by more than a half, but the rates prevailing in the different schools vary to a startling extent. For instance, the average rate among the inmates of the three largest schools (the South Metropolitan, Central London, and North Surrey) did not exceed 7·7 per 1000, while in the thirteen other and smaller schools the rate averaged 16·4 per 1000, and was more than double the rate in the three largest schools. In the West London school the annual rate of mortality during the five years 1873–7 (which embraces almost the entire existence of this district school) averaged 19·3 per 1000 of the inmates, which, whether compared with the rates prevailing in other pauper schools, or with the rate among children at similar ages living outside pauper schools, shows a marked excess. The excess of mortality in the West London school was small, however, compared with that in the Marylebone schools at Southall, where the rate was as high as 42·4 per 1000; the large excess in the Marylebone schools was only to a slight extent accounted for by the exceptionally large proportion of infants among the inmates.

It cannot be urged too strongly that the high rate of mortality in the aggregate population of these schools, and the wide range between the rates of mortality in the different schools, render further information and investigation necessary. A contemporary, which takes upon itself the special defence of local government in all its branches, refuses to see any practical advantage from information relating to the mortality among these pauper children, because in these schools, "the drainage is always good; the food good, sufficient, and regular; overcrowding does not exist; but fresh air, habits of cleanliness, and plenty of bodily exercise, conduce to lower a mortality rather than increase it." It is because we believe that the sanitary condition of these schools is superior to that of the ordinary houses of the London poor, and because the diet and clothing and general treatment of the children are more conducive to their health than the conditions under which the children of the bulk of the working classes in London are brought up, that we are surprised to find that the rate of mortality is so excessive. We have no doubt that the health of pauper children is far better now than it was hal a century ago, but we are not satisfied, with the hard figures before us, that the diet in these pauper schools is always or equally good, sufficient, and judicious; that fresh air, cleanliness, and plenty of bodily exercise are equally the rule in all these establishments. Outbreaks of ophthalmia in these schools are of far too frequent occurrence to allow the possibility of their management being above criticism. Without carefully prepared and readily available statistics of sickness and mortality, and of growth and physical condition, the managers of these institutions, the Local Government Board, and the public generally, must be unable to judge how the national responsibilities in the matter of our pauper children are discharged. Even if such statistics exist for individual schools, which we very much doubt, it is necessary for practical purposes that they should be available in such a form as to be comparable. We trust that now attention has been drawn to the subject, further information will be in future accessible. Such statistics will be valuable from a medical and sanitary point of view, and as a contribution to the facts now being collected by the Anthropological Institute. The treatment of so large a number of children in special institutions, under daily medical inspection, affords opportunities for the study of the effect of various diets and

general treatment, which should not be lost for want of a systematic observation and recording of results.

WE drew attention in our issue of the 6th July to the general provisions of the Contagious Diseases (Animals) Bill, which was read in the House of Commons a second time on May 27th, and was passed two or three days only before the prorogation. One of the primary objects of the Act is to restrict the importation of cattle (including sheep and pigs) from foreign countries, on the supposition that cattle plague, pleuro-pneumonia, and foot-and-mouth disease were originally, and are still being continually, introduced from the Continent and elsewhere, and that these restrictions will eventuate in stamping such diseases out of the United Kingdom. The Act, as originally drawn, was probably one of the most sweeping measures that have been brought into the House of Commons during the last half century. In spite of the comparative success that has attended the Act of 1869, it was evident to all that something else was wanted. But neither the Opposition nor the farmers were prepared for rules and regulations that would by a stroke of the pen have practically stopped the importation into the country of all living animals intended for food. The theory of immunity from disease under such circumstances is but a theory after all; success, therefore, could be only problematical. It is even disputed that the original Bill would have advantaged the breeder to any considerable extent. Anyhow, the passing of the measure meant dear meat for many months to come, and that again meant inferior and bad meat for the poorer classes of the community, thereby affecting health and increasing mortality. So, since the second reading was carried (by a majority of 155 in a full House), the Bill, now an Act, is so much shorn of its originally conspicuous marks as to be hardly recognisable.

It is not necessary to go into minute details. There are some ninety sections and seven schedules. Distinct regulations are laid down in respect of cattle plague, pleuro-pneumonia, and foot-and-mouth disease; ten days being the limit as to the first, fifty-six as to the second, and twenty-eight as to the third malady, during which action has to be taken. The provisions include arrangements as to declaration of infected places, rules for treatment of the disease in each case, when declaration of freedom from the disease may be made and acted upon, circumstances of slaughter, and provisions for payment in way of compensation. There are special regulations as to transit, provision for food and water &c. during the journey, and other rules as to the movement of cattle generally within the kingdom. And there are also sections referring to dairies, cowsheds, and milkshops, to which we referred particularly last week as having very important sanitary aspects.

The 34th and following sections provide that on and after the 1st of January, 1879, the importation of animals from foreign countries may be prohibited, as well as carcasses, fodder, litter, &c., the country from which they are sent, or any part of it, being distinctly specified. The entire strength, or rather weakness, of the Act turns upon these three or four sections, the burden of which, here, there, and everywhere, is: "The Privy Council *may* from time to time," &c. The italics are ours, for the substitution of the *may* for the *shall* (a procedure familiar to legislators and draughtsmen) gives, of course, a permissive tone to the entire measure, and takes away the positive obligation to do anything. In point of fact, the Act, as one of our contemporaries has in effect remarked, merely states the reason for doing that which Government have the power to do already. The other sections provide for the appointment of inspectors, for the burial of carcasses washed ashore, for the detention of vessels, and for expenses.

The schedules, among other things, enact that no restrictions are to be put upon the movement of cattle in districts that are infected, that no market or fair is to be held in an infected area, that foreign animals are to be landed only at certain defined parts of a port, and, when Sect. 33, &c., are in operation, are, after landing, not to be moved alive out of the wharf. Provision is also made for the establishment of so-called quarantine stations, at which arrivals are to be landed intended for exhibition, or other exceptional purposes, but not for slaughter. These regulations now operate, and did so most disastrously for the persons concerned some weeks ago, when a large number of splendid cattle, received from the Paris Exhibition, were quarantined for several weeks at Blackwall, at a cost to the QUEEN, the Prince of WALES, the Duke of BUCKINGHAM, and other distinguished owners and breeders, of several thousand pounds.

We shall await with some curiosity the actual working of those sections of the Act relating to the treatment of foreign cattle. For the stamping-out process, to be effectual, must be mercilessly stringent, and must, in fact, be carried out in a manner almost precisely analogous to that recommended if, under the old quarantine system, cholera is ever to be kept out of this country. But to do this, it will be necessary for the Privy Council to prevent the importation of animals from any place whatever, whenever cattle disease exists in any part of Europe. Will the Council think it advisable, or have the courage, to adopt this extreme procedure? We think not. Meanwhile it is our duty to refer to the subject, not as to its veterinary, but as to its sanitary aspects. Prevention of disease and maintenance of health are materially influenced by the food that we eat, and the health of the poorer classes will probably be influenced by the state of the foreign meat trade, which produces at one time a plethora of live stock, at another a superabundance of carcasses, and at another cargoes of tinned or otherwise preserved animal food of good, bad, or indifferent quality.

THE practical question which underlies the policy of sensational gatherings for scientific display, or the exposition of science, is whether sound knowledge is really advanced by the treatment to which it is periodically subjected? Side by side with the progress of research and study there runs a current of sparkling energy which, while it attracts attention, and possibly awakens interest that would not be excited by the duller methods of old-fashioned enterprise, is not directly tributary to the onward cause of inquiry. It is a weak and narrow stream, which leaps over difficulties, hiding them in clouds of silvery spray, and babbling pleasantly of its achievements in and out of season, but particularly at those fixed periods when, by a convenient arrangement, the workers in science assemble to celebrate the progress they have made and to chant the

pean of triumphs they are believed to have won. It would be a churlish spirit that would grudge busy men, who plod in silence laboriously the long year through, their excuse for a holiday, but it cannot be doubted that there is something almost grotesque, even in these days of high-pressure and topmost speed, about the notion of a formal undertaking to produce as much in the way of genuine scientific results by a certain date each year as shall justify an assembly of *savants*. In so far as the system of annual gatherings for quasi-scientific conference has given rise to an impression that discovery or real scientific work of any description can be done to order, or is to be encouraged by the fostering smile of popular enthusiasm—in so far as this modern system has created an appetite for science in the public mind, we cannot but think it has done harm to, rather than helped the cause of, genuine advancement.

No one can regard the addresses delivered at the annual gatherings of the British Association, or the papers read in its various sections, without feeling that the creation of a demand has reacted on the supply, and that the pressure of "engagements," and the recognition of a popular audience, have largely modified the work done, and affected—it would be only candid to say deteriorated—the results obtained. It is manifestly impossible that such an influence should not be produced. The selection of presidents from the leading men of Science, in its several branches, successively, naturally supplies opportunities for the public assertion of these branches and for pressing their claims on the intelligent community. The men selected are in duty bound to ensure the popularity or, at least, notoriety, of their particular subjects; and it is only reasonable to expect that the consideration will to some extent control their performance. Again, the prominent workers in science are thrust before the public, and are not merely tempted to parade, but are compelled to defend, their position. It was not in the least degree surprising to find Professor TYNDALL, a few years ago, disporting himself in one of these annual orations on the verge, or, as some thought, over the brink, of philosophy, with the peril of plunging other minds, if not his own strong intellect, into the abyss of Atheism. Nor can it have caused astonishment to those who heard Professor HUXLEY'S address in the Section of Biology last week to be entertained with what was, in fact, a triumphant recountal of the progress made, not so much by science as in the popularising of a particular set of views. What is true of these addresses is true of all, from the masterly apology for Mathematics delivered this year by Mr. SPOTTISWOODE to the paper on Milk-testing read in the Chemical Section. The appeal is *ad populum*, and if the *argumentum ad hominem* is not freely employed, abstinence must be ascribed to the good sense of the authors, rather than to the system with which they are connected and the influence under which they act.

We are afraid there is a serious aspect to this popularising of the results of scientific research, and, so far as it is found practicable, of processes and methods. Doubtless, as the President of the British Association eloquently and plausibly contends, intelligence is the gainer by even a general acquaintance with science; but science can scarcely fail to be the loser in the interchange if the spirit, the policy, and the methods that prevail in the non-scientific departments of knowledge are permitted to invade the provinces of precise inquiry, or if the labours of those who have enlisted, and stand pledged to engage, in the serious branches of investigation are converted into an enterprise of search for scraps of popular information, suggestive ideas, or ingenious contrivances whereby the greed of the *quidnunc* may be satisfied, or a claim to the countenance and support of the State successfully enforced. Science, like Religion, has flourished and achieved the best results in neglect, or even obscurity. The project of *advancing* science in any real sense by associations is the outcome of a false conception. It may be desirable and convenient that men engaged in scientific work should enjoy all reasonable opportunities for intercourse and relaxation, but nothing can be less desirable than to make these *réunions* occasions for the presentation of immatured, if not wholly crude, ideas. If a grand review of the army of science is arranged to be held annually, it is impossible that this circumstance should fail to exercise an important effect on the work of the year. Just as a yearly exhibition of the Royal Academy produces a choice of popular subjects and hasty work injurious to Art, the periodic parade of achievements in Science must influence men who are mortal and stirred by human motives to struggle for notoriety instead of prosecuting in silence their life-long researches, in which the energies of the older worthies were expended with permanent results. The sort of progress which Professor HUXLEY celebrates is not the accumulation of additional facts, nor is it in any true sense the concentration of light. GOETHE'S aspiration has nothing to do with the matter. What has been gained is not an advance in knowledge, but an extension of influence. The sum of knowledge has not been increased, but some prejudices have been broken down. The key-note struck by Professor HUXLEY'S argument is the true one, though possibly it proves more than he intended to teach or would care to admit. The inevitable inference from his remarks, and, indeed, the whole tenor and work of the Association, is that the sole object gained, if not the object sought, is the advancement of science—in public estimation, as distinguished from progress on its own lines.

If it be clearly understood that the enterprise of the Association is exclusively *popular*, many mistakes will be prevented. For example, it will be assumed that something like poetic licence is permitted to the promulgators of popularised science, and absolute accuracy of description will not be expected, while the introduction of pleasantries of style and exhibition-methods of demonstration, otherwise out of place in the discussion of scientific topics, may be explained and, perhaps, tolerated. It can excite no surprise, and little regret, to recognise year by year a more liberal development of the "entertainment" element in our so-called scientific gatherings, and a more obvious straining for the picturesque in the treatment accorded to subjects for which those who have been wont to regard science as a serious matter have been scarcely prepared. Meanwhile nothing can mitigate the evil influence exerted on individual enterprise. The fact will remain that science loses by being popularised, and labourers in the field of inquiry are less laborious and more superficial now that the blaze of public notoriety has been brought to bear on their work, and an annual feast of lanterns has been created to glorify their achievements. It

may seem cynical and ungracious to write thus, but the truth must be spoken again and again candidly, and those who are imbued with the spirit of real enterprise will be most ready to appreciate the spirit of our remarks. The real cause of science may languish, and we fear is suffering serious neglect, while the interests of that popular science which throws its glamour over ignorance, and makes it pass for wisdom among the unwise, are, in the estimation of the unthinking community, "advanced."

THE Council of the Hospital Sunday Fund met at the Mansion House on Tuesday to receive the report of the Distribution Committee. The meeting, which was large and representative, was presided over by Sir SYDNEY WATERLOW, Bart., M.P. The adoption of the annual general report of the Committee of Distribution was moved by the Bishop of LONDON, with no criticism of the particular awards, but in a spirit of perfect confidence in the wisdom and fairness of the Distribution Committee. The motion was passed with unanimity. Dr. GLOVER regretted that the report did not convey more information to the members of the Council. It was a mere statement of the award suggested by the Distribution Committee for each individual institution, without any information that could enable the Council to judge of the fitness of it, and it left the Council nothing to do but to acquiesce. Dr. GLOVER read the following motion, which he was ready to propose, and Sir RUTHERFORD ALCOCK to second:—"That a Committee be appointed to consider the possibility and advisableness of a careful analysis of the information in the hands of the Council and of the Distribution Committee, with a view to its being more available for the use of the Council." He invited the opinion of the Council as to the best time for submitting such a motion. A general conversation ensued on this point, and on the general question. Sir SYDNEY WATERLOW, the Bishop of LONDON, and Canon MILLER, while admitting the importance of the motion, pointed out some objections to it. The chief objections urged were the expense of analysing and summarising statistics; and, secondly, the possibility of offending the authorities of hospitals and dispensaries by publishing details not supplied with that intention. There was a general opinion in favour of postponing the motion, to which Dr. GLOVER deferred.

The sum raised this year is about £25,000, and the sum recommended for distribution is £24,460 0*s.* 8*d.*—namely, to seventy-nine hospitals, £22,292 16*s.* 9*d.*; and to forty-six dispensaries, £2167 3*s.* 11*d.*

An important feature in the work of the Committee of Distribution is its special report on the subject of grants to Surgical Aid Societies. It may be remembered that the propriety of awards to these Societies was discussed at a previous meeting, and the question was referred for investigation to the Distribution Committee, which virtually does all the principal work of the Council. On that occasion the value of aid in the purchase of surgical appliances was strongly expressed by several members of the Council, and the failure of the general hospitals to give such aid was admitted. The Distribution Committee on Tuesday reported generally that the Surgical Aid Societies were unable or unwilling to adapt their rules to the requirements of the Council—viz., to give surgical aid, by the supply of instruments to fit cases, on one letter of recommendation only for each case. On the other hand, the authorities of the Samaritan Funds connected with the general hospitals, in answer to inquiries by the Distribution Committee, have almost unanimously intimated their willingness to dispense any funds granted by the Council for this purpose, without requiring any letter of recommendation, on the strength of the certificate of fitness by a surgeon on the staff. The Surgical Aid Societies cannot be congratulated on refusing to alter the rules which require patients wanting costly appliances to get a multiplicity of letters, and sometimes to pay sums amounting to almost the full value of the instruments given. The case of patients needing surgical instruments—generally lame and incapable of locomotion—is eminently one for the application of the principle *bis dat qui cito dat*. It is no justification to allege instances of deception and abuse. Multiplication of letters is not a remedy for such evils. The Committee of Distribution recommend that the sum of 1 per cent. of the total of the collections in future years shall be set aside for the purchase of surgical appliances. This would be very satisfactory if the sum so set aside did not imply so much subtracted from the amount at the disposal of the Council for the ordinary purposes of hospitals and dispensaries. It is not quite apparent whether the sum is to be distributed *pro rata* among the hospitals and dispensaries generally, or amongst those only which have a Samaritan Fund. This must be made clear.

The question of classifying and defining the most valuable information possessed by the Council, and raised by Dr. GLOVER, is one of great interest. It is at the very least entitled to consideration by a well-selected committee. Neither the Council of the Hospital Sunday Fund nor the Distribution Committee can do their work well without having the materials for sound judgment before them in a lucid and accessible form. Neither of these bodies will be suspected of any other than kindly feelings toward medical charities, and a desire to develop their usefulness. The information is already given freely by the institutions benefited. But it is practically buried and unused except by the eight or ten members of the Distribution Committee. It is curious to see Sir SYDNEY WATERLOW so ingenious in arguments for burying the information of the Council, and so fearful of the effect of a more extended and minute study of the invaluable statistics which the hospitals and dispensaries have cheerfully furnished to the Council. It is due to them to put the data into such a form that they can be studied and understood by all the members of the Council of the Hospital Sunday Fund.

Annotations.

"Ne quid nimis."

ARMY MEDICAL DEPARTMENT.

NOW that Colonel Stanley has been relieved from the labour of nightly attendance in the House, and from the worry of perpetual questions by honourable members, we trust that he will lose no time in considering the report of the Committee on the state of the Army Medical Department, and making known the measures to be adopted for its regeneration. There is one point connected with the ques-

tion which has scarcely received notice, but which we are disposed to think has a considerably deterrent influence on the class from which candidates are recruited—we mean the intrant examination. Young men who have just gone through the horrors of an examination for their diplomas and degrees do not care to grind up for another for the army. The question may fairly be asked, Is it necessary or is it advantageous? When it was first instituted there was a marked difference in the character of the examinations of the different licensing bodies, and considerable looseness in that of some of them. This has to a great extent been remedied by the system of visitation introduced by the Medical Council, and there is now a better guarantee that the licence represents a fair qualification to practise. At that time also the candidates were so much in excess of the vacancies that the examination was not merely intrant but competitive, and the service derived from it the benefit of selection of the best qualified men. Now, however, the case is different, and all are admitted who obtain the minimum number of marks. Is it worth while, then, to keep up, at a considerable cost for examiners, that which is unnecessary as a test of fitness, and useless for the purpose of selection? We think not, and would suggest to Colonel Stanley, therefore, to abolish the examination of candidates for admission, and to retain only that which takes place at Netley at the end of the course, to ascertain that the candidates have taken due advantage of the opportunities of instruction afforded them in that excellent special school. In addition to this we would strongly recommend an increase of the allowance to the candidates during their period of probation. We have frequently had complaints made to us that the sum was inadequate to cover the few expenses to which the candidates are subject. If, instead of five shillings, they were allowed seven-and-sixpence per diem it would add a very moderate sum to the expenses of the department, and would remove the feeling of being hardly dealt with, which is at present a subject of complaint on the part of the young officers. These ameliorations, with the improvements in the department which we have repeatedly pointed out, and the abolition of the short-service system, would, we believe, have the effect of again making the service popular. They would also have the advantage, if brought immediately into operation, of enabling candidates to join at Netley in October, when the next course of the Army Medical School begins, and thus ensure to the department an adequate and much needed supply of officers.

THE PENNY ICE TRADE.

AT about four in the morning, during the summer season, Eyre-street-hill, and the neighbouring courts and alleys, are alive with several thousands of active loquacious Italians. They descend simultaneously from their wretched and overcrowded lodgings into the streets, and hurry off with pieces of flannel, rags, clothes, or baskets to purchase large quantities of common ice. Here there is a wholesale depôt, where tons of ice are sold to the small makers. When this has been procured, the Italians prepare and freeze the penny ices. All that they require for this purpose—colouring matter, sugar, arrowroot, flavouring essences, milk, and eggs—are said to be procured in the immediate vicinity. No one who has not witnessed this scene could imagine the enormous business done within an hour or two by the owners of dingy, dirty, nondescript little shops, where great wealth is accumulated despite the appearance of poverty. When the ices are mixed and ready in the freezers, the manufacturers return to their lodgings and complete their toilette, which up to that moment has been allowed to remain in a state of uncleanly, if picturesque, *négligé*. And now the exodus commences. One by one the barrows are dragged away by their owners, some travelling a distance of even ten miles before the customary spot or "pitch" is reached, the Italians prefering to perform these tedious daily journeys so as to enjoy the advantage of living together in one compact colony. Towards the end of the day, from seven up till ten at night, the ice-men gradually return. A person unacquainted with these circumstances would be utterly amazed, if he visited Saffron-hill on a summer's evening, at the sight of endless troups of penny-ice-men.

These facts, from a sanitary point of view, are of considerable importance. Of course not all the penny ices sold in London are made on Saffron-hill, but in any case the majority are manufactured on this spot, and it would therefore be easy to watch the process, and hold a firm check over the methods employed. If one person were found transgressing and punished, the whole colony could be made immediately aware of the fact, and would take warning. These Italians are inspired by an ambition that should render them particularly careful to avoid the clutches of the law. They are an abstemious, thrifty people, and indulge in views as to their future that would startle our working men, and even our middle classes. They boldly make up their minds to ten or twenty years' hard work and assiduous saving, in the course of which time they generally succeed in hoarding enough money to buy a small farm in their own country, with the right of shooting over the neighbouring hills. The penny-ice-man looks to end his days as a landed proprietor and a sportsman!

The colouring matter employed in this locality is said to be purchased from dispensing chemists. Cochineal is the principal article sold for the purpose, though a good many makers also buy the aniline-red crystals. With these they can colour about thirty gallons of ice for threepence, whereas the cochineal would cost about eighteenpence for the same amount. The cream ices, however, are sometimes coloured, so that they may appear as if they contained many eggs. This is done with saffron; but dealers who consider this ingredient too expensive, or whose customers are not over-particular, prefer turmeric. The latter imparts a dullish-yellow, which is scarcely appetising; but it costs only a shilling a pound, while the saffron is retailed at twenty shillings for the same quantity. There is also a large quantity of gelatine sold, which is employed for thickening ices, and this is often of a very inferior quality. A colouring matter sold for ices consists of four ounces of the aniline-red crystals, purchased from the original patentees, dissolved in one gallon of distilled water, and one drop of this solution suffices to colour one ounce of water, which is equivalent to a halfpenny ice. A pint to a pint and a half of what is called raspberry ice can be produced for one penny, and it often consists simply of colouring matter, of frozen water and sugar, the latter being the only expensive item.

The "cream ices" are differently prepared. A little milk must be employed, then arrowroot is often added to thicken, while essence of vanilla and even eggs complete the flavour. The profits are consequently very much reduced, but the cream ice is naturally considered more wholesome and palatable than the others, and the demand is greater. A cheap imitation of the Neapolitan ice is known in the rough quarters where it finds favour by the homely title of "hokey-pokey." This consists of very bad cream and very watery lemon ice cut into square tablets, folded in white paper, and sold at the rate of two a penny.

Frozen water, cochineal, and a little sugar added to the rotting cheap fruit so easily obtained in summer, may well engender sickness. The aniline-red crystals also may not always be of the purest description; they may occasionally retain some trace of the arsenic used in the process of manufacture. It is true the proportion of arsenic to each ice must be so minute that it can scarcely be dangerous; nevertheless some more effective supervision ought to be

exercised over this branch of street trade. The sanitary authorities of each district should make it a practice to collect and examine samples of the ices sold in the streets.

THE GENERAL MEDICAL COUNCIL AND THE DENTISTS ACT.

FOR the time being the officials of the General Medical Council are overwhelmed with work in connexion with the registration of dentists. The Council itself is likely to meet, in execution of the Act, about the second week in October. Meanwhile registration has commenced, and will proceed on the application of persons entitled to be registered on the strength of their being either licentiate in dental surgery or dentistry of any of the medical authorities, or, at the passing of this Act, *bonâ fide* engaged in the practice of dentistry, either separately or in conjunction with the practice of medicine, surgery, or pharmacy. We do not envy the Registrar in having to decide what constitutes the practice of dentistry *bonâ fide* in connexion with pharmacy. Surely it will not be held to consist in the mere act of extracting teeth. Registration before the 1st of January, 1879, will cost a fee not exceeding two pounds; after that date the fee is not to exceed five pounds. It may be assumed that there are from 1500 to 2000 dentists in the United Kingdom. The fees accruing from their registration will suffice to pay the expenses of the Council and of the additional labour thrown on its officers; but the more the Act is considered, the more questionable appears the wisdom of adding such work to that of the Council. The recognition of foreign and colonial dental diplomas will be the duty—no easy one—of the Council itself; but in regard to the evidence entitling persons in Britain to be registered as dentists, the Registrar is to act on such evidence as in each case appears sufficient.

BIRTH-RATE AND INFANT MORTALITY IN ENGLAND.

IN the columns of an evening contemporary Dr. Charles R. Drysdale has recently published, in the form of a letter, some remarks made by him as vice-president of a section of the International Congress of Hygiene, held in Paris at the beginning of this month, which was attended, we are informed, by some 1500 medical men. The subject of Dr. Drysdale's remarks was infant mortality in different European States, and he appears to have been at especial pains to discredit our English registration system, and to convey the impression that nothing trustworthy is known about infant mortality in England, and that the Registrar-General's statistics on the subject are useless, as very much understating the true rate of infant mortality. Dr. Drysdale, however, does not seek to disguise that he is an ardent disciple of the population theories of Malthus and John Stuart Mill, and appears convinced that a regulated and reduced birth-rate is what is chiefly wanted in England. Imbued with these theories, he yet finds that infant mortality, as calculated by the Registrar-General, is lower in England, in spite of its high birth-rate, than in most other European countries; lower even than in France, where he tells us that the families of the peasants are "limited" to two or three. Finding these figures in the Registrar-General's reports so contrary to the figures he would wish to find to support his theories, he straightway denies their accuracy, calls our registration system absurdly inadequate, and declares "the calculation of infant mortality in this country quite useless." Dr. Farr's figure of English infantile mortality, says Dr. Drysdale, is much too low, and he proceeds to raise the figure by about 25 per cent. on what appears the most shadowy of pretexts. He asserts that, because the law of registration in England allows parents six weeks in which to register the births of their children, large numbers of children who die young *must* escape registration altogether. This is a mere assertion, but it is also improbable. As a certificate of registration must be produced at burial, deaths cannot well escape registration, and, beyond the fact that the registration of births is now compulsory in England, the births of infants who die during the first six weeks of life are least likely to escape the vigilance of the registrar, who, paid by fees, is certain, when registering the death of a young infant, to turn to his register and see whether its birth has been registered. No, Dr. Drysdale notwithstanding, it is an undeniable fact that the rate of infant mortality in England, in spite of the unrestricted birth-rate, is considerably lower than in France, with its regulated birth-rate. During the five years 1872-6, the birth-rate averaged but 26·3 per 1000 in France, while it was equal to 35·9 in England; the marriage-rate, however, was rather higher in France than in England. All will not be so surprised as Dr. Drysdale to find that a regulated birth-rate is not the panacea for excessive infant mortality, which he theoretically fancies it to be. The excess of infant mortality in France he attributes to causes which he is sanguine enough to think the late Congress will help to remove. In entering into competition with France for the reduction of infant mortality we need not be afraid that the non-regulation of our birth-rate will prevent us from maintaining the lower rate of infant mortality.

THE TROOPS AT CYPRUS.

THE state of health of the military force sent to Cyprus has been brought somewhat prominently before the public. In one journal it was asserted that 25 per cent. of the men were on the sick list. Colonel Stanley stated to the House that there was a considerable amount of sickness, but not of a serious character, and that the proportion on the sick list did not exceed 6 per cent. It might naturally have been expected that a change of quarters at this season of the year, more especially to a place not previously occupied by British troops, and wanting in all the conveniences provided for our army in its regular stations, would be attended with a marked increase in the number of sick. The troops arrived at Cyprus in the very hottest period of an unusually hot summer; they were of necessity much exposed to the sun in making all the necessary arrangements for encamping; and from want of suitable accommodation were obliged to be put under canvas. It is not surprising that under these circumstances numerous cases of fever from exposure to the sun should have occurred among the men. They are stated to have been of a mild character, and to have given rise to no fears of serious results. The 42nd Regiment is said to have been affected to a much greater extent than any of the other corps, and this might naturally have been expected, bearing in mind their recent service on the West Coast of Africa, where the men contracted a liability to fever which may cling to them for years. It is difficult to understand on what principle this regiment was selected to proceed from Malta to Cyprus. Evidently the Director-General was not consulted in the matter, as he must have fully appreciated the folly of sending it under such circumstances. The influence of its previous service on the form of disease may be inferred from a statement that the fever in many cases had assumed the intermittent form. We feel sure that when the returns are received at the Medical Board, it will be found that these cases were chiefly, if not entirely, confined to that regiment.

It is probable that the circumstances which have given rise to the somewhat heavy sick-list at Cyprus were, to a great extent, unavoidable from the haste in which it was deemed necessary to take possession of the island. But this excuse will not avail much if the authorities do not take

immediate steps to place the men in circumstances favourable to their sanitary condition. We understand that wooden huts are now on their way out, and we have every confidence that Sir Garnet Wolseley will select healthy sites for the camps in which the troops are to be quartered. Indeed, in a telegram to the *Standard*, it is stated that already "a plateau upon Mount Olympus, 4000 feet above the sea, and at an easy distance from the capital, has been selected as the site of a cantonment. It is very salubrious, abundantly supplied with water, and most aromatic with the fragrance of the pine woods." We trust Sir Garnet Wolseley will also take the necessary measures to have the men suitably clothed before winter commences in a station where the range of temperature is great, and very cold winds prevail during that season. The sanitary arrangements of this new possession will be carefully watched at home, and any neglect will be surely visited with censure upon the party responsible for the health of the troops.

SMALL-POX AND CABS.

THE propagation of infectious diseases by cabs has been, no doubt, greatly lessened by the vigilance of the authorities of the special hospitals in reporting to the police cases in which the law is broken, and the due prosecution of the offenders. But the danger, although lessened, is by no means removed. The cases are rare in which patients are taken to small-pox or fever hospitals in public vehicles; but cabs are still largely employed to convey patients suffering from infectious diseases before their character is certainly known. Patients suffering from attacks of illness which turn out to be of a contagious nature are every day brought in cabs to general hospitals. A servant in a household is taken ill, a doctor is called in, probably in the evening, and states that "the girl is going to have some disease, what it is he cannot say with certainty, but he thinks it may, not improbably, be small-pox." To get the sufferer out of the house without a moment's delay is the instant concern of the patient's master. He does not *know* that it is small-pox, and so a cab is called, and the girl put into it and sent to the nearest hospital. There the cabman leaves her, and drives away. The girl is found febrile, with a suspicious rash, is probably kept in the hospital for the night, and in the morning the rash of small-pox is distinct enough. The cabman's number was of course not taken—very likely the hospital porter hardly noticed how the girl came,—and the cab receives no disinfection, and communicates the disease to half-a-dozen "fares." All know the panic into which a household is thrown by a case of infectious disease, a panic strong enough, until recent penal measures were put in force, to lead to utter disregard for the public safety. It is evident that that safety can only be secured by the disuse of public conveyances when there is even a suspicion of infection. The master of the household acts, so far as he is concerned, on the supposition of infection, packs off the patient instantly, "to be on the safe side," but in doing so he does not extend to the public the same precaution, but exposes them to the probable danger from which he protects himself, and excuses himself by the consideration that "he was not sure of the nature of the disease." It is in vain to appeal to the good sense of the public to abstain from the use of cabs when there is only a suspicion of infection, however strong that suspicion may be. We know that it is useless to appeal to such considerations in the case of known contagion. The evil can only be arrested by enforcing the law against those who use public conveyances when the nature of the disease is the subject of a reasonable suspicion only. It is far better for a patient to remain an hour or two longer where he or she may be until an ambulance can be obtained, which will be at once disinfected, than for infectious disease to be spread in the way we have described. The danger is by no means imaginary, as the resident medical officers at every London hospital could testify.

Probably the effects may be a little lessened by more careful observation of the cabs in which these cases are brought. It is very important that the number of every cab which brings a patient to a hospital should be noted down. It would be well if cabs could always be detained until the patient had been examined, but this is not possible in all cases. At any rate, the number of the cab might always be taken by the hospital porter, and then disinfection could be secured, and even if somewhat late, it would be better than the indefinite infection which now goes on.

CONTAGIOUS PNEUMONIA.

EPIDEMICS of pneumonia have been described from time to time, chiefly on the Continent, and an account of recent outbreaks, having almost an epidemic form, which occurred at Moringen in Hanover, has been given by Dr. Kühn. In this place he has more than once observed pneumonia to have an epidemic character, and on one occasion it broke out in the gaol, when overfilled. All other conditions being favourable—position, soil, drainage, ventilation, drinking water, clothing, and food,—the cause of the outbreak appeared to be the impurity of the air of the cells. The individual cases presented the aspect of a well-marked infectious disease, with much prostration, a considerable enlargement of the spleen, albuminuria, and, in two-thirds of the cases, diarrhœa. It is notable that the disease did not begin, as in ordinary acute pneumonia, with a sudden onset and rigor, but was ushered in by four or eight days of prodromal symptoms. The pyrexia came on usually without an initial rigor, and ran a severe course. The pneumonic consolidation was recognisable usually on the third or fourth day of the fever, was frequently seated in the upper lobes, and exhibited a marked tendency to migrate. Often it was accompanied by inflammation of the serous membranes, pleurisy was almost constant, in one-fourth of the cases there was pericarditis, and of forty-five cases well-marked meningitis was present in five. Angina and stomatitis were not unfrequent accompaniments. The temperature sometimes attained a height of 107°, and began to remit on the fifth to the seventh day. Post-mortem examination showed fatty degeneration of the heart, acute swelling of the spleen to three times the normal size, and a parenchymatous nephritis. Frequently the intestinal follicles were swollen. The disease was distinctly infectious. The attendants of the institution were affected, and the disease was conveyed by visitors to other persons who did not come near the prison or its inmates. In one epidemic Kühn observed eighty-three, and in another seventy cases. In each epidemic abortive attacks of the disease were also observed. He urges that this form of pneumonia must be distinguished from the genuine croupous pneumonia, and that its character approximates it to typhoid disease; and he suggests that possibly it may be due to the same poison as typhoid, modified by some unknown conditions—a sport, as Dr. Roberts would put it, of the typhoid germ.

COMPARATIVE DIARRHŒA FATALITY IN LARGE TOWNS.

THE epidemic fatality of summer diarrhœa, which was unusually severe in urban populations during July, is now declining. The deaths referred to this disease in twenty of the largest English towns, which had been 1159 and 947 in the two preceding weeks, further declined to 818 in the week ending 17th inst. The annual death-rate from this disease, which became epidemic shortly after the hot weather in the last week of June, has averaged 4·8 per 1000 in the twenty large English towns during the past eight weeks, being

equal to 4·2 in London, and to 5·4 in the nineteen provincial towns, which have an aggregate population very nearly equal to that of London. The diarrhœa death-rate during this period ranged from 1·5 and 2·3 per 1000 in Oldham and Bristol, whereas it was equal to 11·1 per 1000 both in Hull and Leicester. Compared with the fatality of this disease in recent summers the largest increase this year has occurred in Hull, where the excessive death-rate in the past few weeks is even more remarkable than that in Leicester, inasmuch as it cannot be attributed in Hull, as it has been in Leicester, to the large proportion of mothers engaged in factory labour. It is worthy of note that, whereas in the week ending 17th inst. the death-rate from diarrhœa in these large towns showed a general decline, it was higher in Norwich, Plymouth, Bristol, Wolverhampton, and Birmingham than it had been in those towns in any previous week of the summer. This is sufficient proof that the course of the epidemic is not entirely dependent upon temperature or other meteorological conditions.

MANCHESTER MORTALITY STATISTICS IN 1876-7.

THE medical officer of health for the city of Manchester has just issued his biennial report relating to the two years 1876-7. Manchester and Salford are almost the only two of the twenty large English towns which do not publish annual health reports, and the sooner they conform to the almost invariable custom the better it will be for their public health, and for those interested in the sanitary progress of our large towns. Not that the present report for Manchester, so far as its vital statistics are concerned, throws much light upon the sanitary condition of the city. The results arrived at differ so materially from those that have long since been published by the Registrar-General, that those who have both figures before them cannot fail to be fairly puzzled. Mr. John Leigh uses a different estimate of population for his city, which, based upon a return of inhabited houses, he makes 368,173 in the middle of 1877, instead of 359,213 as estimated by the Registrar-General. The medical officer of health, with the advantage of local information, may well be in a position to frame a more correct estimate of the population of the city than the Registrar-General, but this is not the only or the most important difference between the medical officer of health's figures and those of the Registrar-General. Mr. Leigh gives the number of deaths in Manchester in 1877 as 9034, and the Registrar-General states them to be 9810. While there is room for reasonable difference of opinion as to the estimate of the population of Manchester, six years after the last census, it cannot be a mere matter of opinion how many deaths occurred during last year among the population of the city; and a difference of nearly 9 per cent. between the two figures is of so much importance that until the discrepancy is explained one is inclined to give up the attempt to make any use of the mortality statistics of Manchester. The difference appears to arise from the fact that for some reason Mr. Leigh takes no account of 634 deaths of municipal paupers recorded during 1877 in workhouses situated outside the city, and also excludes, in a similar manner, 138 deaths that occurred in the township of Beswick; whereas these 772 deaths are included in the number debited to the city by the Registrar-General. If this be the explanation of the marked difference between the two sets of figures, it is difficult to see how Mr. Leigh can justify the exclusion of these 772 deaths from his calculation, which appears to vitiate the whole of his mortality statistics. According to the Registrar-General the death-rate of Manchester in 1877 was considerably higher than that which prevailed in any other of the twenty largest English towns; indeed, the rate is still higher than that of any other of these towns, even if Mr. Leigh's revised estimate of population be used as the basis for the calculation. It is therefore especially disappointing to be unable to use the mortality statistics of the medical officer's report for the elucidation of this excessive rate of mortality.

THE ABSORPTION AND EXCRETION OF WATER.

THE absorption of water from the alimentary tract is a subject to which less attention has been directed than its practical importance deserves, for the subject is not so simple as might at first sight appear. Dr. Skorczewski, of Cracow, has made an interesting series of observations on the relation in time and quantity between the absorption of water and the excretion of urine, and his results have been published in a Warsaw journal. The observations were made upon men and rabbits, and in the latter provision was made to secure the urine as soon as it passed into the bladder. Spring water, soda water, and certain Russian mineral waters (those of Krynica and Iwonicz), were employed in the observations. The following conclusions were reached. After the injection of spring water the quantity of urine did not increase immediately, in the case of either men or rabbits, but rose after a certain time, which is said to have been the longer the more water was taken. A longer period elapsed after the spring water than after the mineral water before the increase in the urinary secretion occurred; and the more spring water was taken the longer was this interval, and the more mineral water the shorter was the interval. The increase in the urinary secretion reached its height sooner after the mineral water than after spring water. The greatest total effect on the urinary secretion was obtained with soda water, the next with spring water, and the least with the mineral waters. The quantity of urine was in each case smaller than the quantity of water ingested, with the exception of that which was saturated with carbonic acid. The difference between the total quantity of liquid taken and the total quantity of urine excreted was less after ordinary spring water than after the mineral water.

A second series of observations had for their object to ascertain the relation in time and quantity between the water absorbed and the urine excreted. This was effected by killing rabbits at certain periods after the water was injected into the stomach, the excretion of urine being observed in the same way as before. From these observations it appeared that the increase in the excretion of urine did not commence until after the whole of the water had been absorbed, and in the case of both small and moderate quantities of water (40 to 100 c.cm.) a period of ten or fifteen minutes passed after all the water had been absorbed before the effect on the urine was apparent. It is calculated that 500 cubic centimetres of water is absorbed from the human stomach in fifteen minutes, and 200 c.cm. in five minutes. These results are true, however, only of spring water. Mineral water behaves differently. The increase in the excretion of urine occurs the earlier the slower the absorption progresses. By the exclusion of certain possible causes for this difference, such as altered pressure in the abdominal cavity, direct irritation of the splanchnic nerve, or the effect of blood-tension, the conclusion is reached that the cause is the alteration in the blood consequent on the admixture with it of the saline substances in the mineral waters, the change in the blood acting as a stimulant to the vaso-motor nerves.

Whatever be the precise value of these researches, they show conclusively that the function of the stomach and kidneys may be materially affected by the presence of very small quantities of saline substances, and they indicate how much caution is necessary in applying rules true of pure water to water which we are accustomed to consider

as differing from spring water by very trifling qualities. As an instance of the practical importance of these facts, it is evident that the saline waters, so commonly taken with food, remain in the alimentary canal for a much longer time than spring water, and are capable therefore of disturbing in a greater degree the process of digestion.

THE NEW LUNACY REPORT.

THE Thirty-second Report of the Commissioners in Lunacy is just issued. From this it appears that the total number of registered lunatics, idiots, and persons of unsound mind in England and Wales on the 1st of January last (1878) was 68,538, showing an increase of 1902 over the number registered on January 1st, 1877. The distribution is as follows:—In County and Borough Asylums: Males 17,116, Females 20,647; total 37,763. Registered Hospitals: M. 1453, F. 1325; tot. 2778. Licensed Houses (Metropolitan): M. 1123, F. 946; tot. 2069; (Provincial) M. 1025, F. 1108; tot. 2133. Navy and Military Hospitals, and Royal India Asylum: M. 345, F. 15; tot. 360. Criminal Lunatic Asylum: M. 381, F. 101; tot. 482. Workhouses (ordinary): M. 5074, F. 6785; tot. 11,859. Metropolitan District Asylums: M. 1952, F. 2454; tot. 4406. Single patients (private): M. 188, F. 286; tot. 474. Out-door Paupers: M. 2367, F. 3847; tot. 6214. The totals are—Private Patients: M. 4172, F. 3520; tot. 7692. Pauper: M. 26,852, F. 33,994; tot. 60,846. In all: M. 31,064, F. 37,514; grand total, 68,538.

The Commissioners have taken a step in advance by introducing the ages of patients and other particulars. They say: "It has been thought well to summarise and insert in the present Report certain further facts of interest obtained from the registers kept during 1876. We have accordingly introduced, as regards the year 1876, tables showing the ages of all patients admitted into asylums, their condition as to marriage, together with the ratios deduced from a comparison of the statistics of age and marriage condition for the entire population of England. The number and proportion will also appear of admissions where the unsoundness of mind was attributable to congenital defect, and where insanity arose later in life, distinguishing between the "first," and "not the first attack." Special information on most of these points has also, as far as possible, been tabulated as regards the patients affected with general paralysis of the insane, and admitted during 1876; together with a summary of the causes or influences which were deemed to have mainly contributed in producing insanity in the cases of those suffering from that particular form of mental and physical disorder."

We reserve comment until next week.

THE HISTOLOGY OF SYPHILITIC TONSILS.

THE microscopic anatomy of the syphilitic tubercular patches which are often seen upon the tonsils was the subject of a recent communication to the Paris Academy of Medicine by M. Cornil. The tubercles had been removed from the tonsils of patients, for the purpose of examination, without difficulty, and the wounds thus produced had healed as readily as in an individual free from syphilis. He described, first, the structure of the "opaline mucous tubercle," a section of which, examined under a low magnifying power, shows thickened epithelium and hypertrophy of the papillæ, while the deeper connective tissue is thickened by infiltration with new cells. The superficial epithelial layer presents cells which possess a cavity around their nucleus. Often there are one or two globules of pus in the cavity instead of a nucleus. Further, within this superficial layer of epithelium, nests filled with globules of pus may be found—true abscesses excavated among the epithelial cells, and containing from four or ten to a hundred globules of pus. These little abscesses, rounded or lenticular in shape, are surrounded by cells flattened by compression, and are commonly situated on the surface of the tubercle, where they open from time to time. Thus, from the surface, a liquid transudes, containing many epithelial cells, with globules of pus among them, or collected in little abscesses between them, and the current of liquid which passes from the papillæ on the surface of the tubercle contains globules of pus. This is the cause of the opacity of the epithelial covering at the summit of the tubercle which gives it the opaline aspect.

The second variety examined was the ulcerated form. In this the epithelial covering is disintegrated by the large quantity of transuding liquid and the globules of pus which come from the papillæ. The epithelial layer may fall off entirely, and then the inflamed papillary layer constitutes the base of the ulcer. Sometimes there is a true false membrane, grey, adherent, and diphtheritic in character, over this ulceration. It does not contain, however, as in diphtheria, microscopic organisms, but the branching forms of the epithelial cells, the holes or cavities which they present, and which contain globules of pus, produce the same appearance as in diphtheria. In all cases, whether the tubercles are opaline or ulcerated, the closed follicles of the tonsil are inflamed, and the entire organ is hypertrophied. The perifollicular lymphatic sinuses and the retiform tissue present a variable quantity of large cells, with one or several nuclei, containing red-blood globules. This lesion of the tonsils is identical with that which M. Cornil has lately described as found in the glands in the first and second periods of syphilis; so that he believes it to be correct to say that the syphilitic tonsils of the second period represent a papule upon a syphilitic gland.

DEATH BY DROWNING.

A SERIES of experimental researches on death by submersion, and a number of post-mortem examinations on bodies found in the water and brought to the Paris Morgue, have furnished MM. Bergeron and Montano with a valuable collection of facts. Death by submersion may occur under very different conditions. The individual may fall into the water accidentally or may have been thrown there by an act of violence. This may have occurred during his sleep, whether natural or artificial, as in drunkenness or narcotism. The investigators reproduced experimentally some of these special conditions, as by narcotising animals with opium or chloroform, or rendering them motionless by curara, and then drowning them. They varied also, as much as possible, the special circumstances of submersion by more or less restraint of movement. The conclusions which they have reached are as follow:—1. The existence of a mucous foam, not only in the fauces and larynx, but also in the bronchi, is the constant sign of death by submersion, whether there was predominant syncope or asphyxia, whether the individual was free in his movements, or whether he was thrown into the water after having been narcotised by chloroform or opium, half suffocated, or restrained in his movements. This constant presence of foam, whatever were the special circumstances in which the immersion took place, is, they maintain, the only constant sign of death by drowning. 2. There is always a certain amount of congestion, and there are sometimes subpleural ecchymoses; but these ecchymoses, which give to the lungs a mottled aspect (*aspect tigré*), never have the appearance of the punctate ecchymoses of suffocation. The sign given by Tardieu as characteristic of the latter form of death thus preserves all its value. 3. The intensity of the congestion and the extent of the ecchymoses are always in proportion to the struggles of the animal. It is the same with man, as the authors have verified by all the autopsies made at the

Morgue during ten years. This fact has considerable medico-legal importance. The autopsy thus reveals something of what occurred during the last moments of life—whether the individual did or did not struggle energetically against the submersion.

THE TRANSPLANTATION OF TISSUES.

A SERIES of systematic experiments on the transplantation of tissues has recently been carried out by Dr. Zahn. The first observations were made on the transfer of hyaline cartilage from one adult animal to another. The tissues into which the fragments were implanted were the subcutaneous connective tissue, the anterior chamber of the eye, the submaxillary glands, the kidneys, the testicles, and the blood-vessels. These attempts yielded, however, negative results; the cells of the tissue perished, the intercellular tissue persisted, but the fragment became encapsuled by connective tissue. The experiments were much more successful when the fragment was taken from fœtal cartilage, which showed a remarkable capability of developing in another organism, even in that of an adult animal. If some cartilage were rubbed up with amniotic fluid, the smallest quantity of the mixture produced, in about six weeks, nodules of cartilage the size of a lentil seed. On injecting this mixture into the jugular vein, numerous growths of cartilage were subsequently found in the lungs. The capacity of fœtal cartilage to develop is so great that these results were obtained, not only with animals of the same species, but even with those of different species. For instance, cartilage from the fœtus of the cat gave rise to nodules in rabbits. Experiments were also made with the cartilage from an enchondroma, with less uniform success than with fœtal cartilage, but with much more success than with ordinary adult cartilage. In several instances the attempts to transplant it were successful. This is, it is hardly necessary to point out, a result of much interest in connexion with the diffusion of enchondromatous growths. With other fœtal tissues Zahn was also successful. A piece of growing bone, for instance, became connected with the bloodvessels of the tissue into which it was placed and became nourished. Entire bones were even thus implanted, and, although they did not grow as a whole, they preserved their form, and outgrowths occurred—exostoses and enchondromata—at both the epiphyses and diaphyses. From these experiments, and those of previous investigators, Zahn concludes that only fœtal tissues, and such adult tissues as preserve their fœtal peculiarities, can develop in another animal, or in another part of the same animal. Only, for instance, the red marrow will do so, and the periosteum of young individuals. Such tissues alone possess the capability of persisting until they have come into relation with the new organism.

YELLOW FEVER.

THE latest accounts from American sources as to the progress of this epidemic are most unfavourable. In New Orleans there were 135 new cases and 20 deaths on the 14th inst. *The Times* reports that "the disease has been carried up the Mississippi river by steamboats to Grenada (Mississippi), and that all but 700 of the whole population had left the town; of those remaining, 150 were affected." Telegrams dated the 20th inst. state that the mortality in Grenada is still increasing, that the railways and steamboats are crowded with fugitives from the fever-stricken cities, and that physicians, nurses, and provisions are being sent from New York for the sick. The last advices from New York say that the fever in Louisiana is increasing, and that up to the present date (21st) 1400 cases and 436 deaths have occurred in New Orleans.

The French settlement of Senegal, on the West Coast of Africa, is also suffering from a severe visitation of yellow fever. Thirty-five persons, including five sisters of charity and an apothecary, have died of the disease. The governor of St. Louis has asked for doctors to be sent from France, as a measure of precaution, though no case has as yet occurred there. Yellow fever is also raging at Dakar.

RESEARCHES ON THE SUPERANAL GLAND OF CARTILAGINOUS FISH.

M. BLANCHARD, of Vienna, has recently studied the relations of this peculiar gland, which appears as a digitiform appendage or diverticulum of the posterior extremity of the digestive canal, either free or imbedded in the walls of the intestine, in all cartilaginous fish. He finds that it is primarily developed in the form of a bud at the upper and left border of the intestine from the middle layer of the blastoderm. When free it is covered with the peritoneum, and formed by the elements of the intestinal glandular layer and by those of the middle layer of the blastoderm, which usually participate in the construction of the intestine. The gland substance itself is composed of tubules lined throughout by cubical epithelium. It is as fully developed in the embryo as in the adult, but not quite so compact in structure.

RUSSIAN SISTERS OF CHARITY.

THE Russian Government has announced its intention to confer life pensions on the Sisters of Charity who have worked in the military hospitals during the war. It is proposed, moreover, to give a permanent character to the sisterhood in relation to military administration, on the ground that their mission is indispensable in time of war. The sisters who have taken part in the last war will form, therefore, the basis of an organisation for the supply of sisters to the various military hospitals in time of peace, and for the proper training of women in the duties of the sisterhood. It is contemplated, moreover, that in peace the duties of the sisterhood shall not be limited to military hospitals, but that, in view of the larger field for obtaining a knowledge of and practising their duties, in view also of the experience of the last war, in which voluntary help has had so important a part in the treatment of sick soldiers, and in which civil and military hospital practice have overlapped each other, so to speak, to meet the exigencies of the campaign, the duties of the sisters shall also extend to municipal and other local hospitals.

ARTHRITIS SECONDARY TO ACUTE MYELITIS.

THE occurrence of arthritic changes secondary to chronic spinal affections is now well established, but instances of these changes as the result of such acute affections of the cord as give rise to the sloughing of the tissues have very rarely been recorded. Such a case is described by M. Vallin in a recent number of *L'Union Médicale*. Complete paraplegia came on in the course of two days in a healthy young man, accompanied by loss of sensibility and of power over the sphincters, death occurring at the end of two months in consequence of extensive bedsores, which had commenced on the second day of illness. The initial lesion was found to have been confined to the grey matter and posterior column. Phlyctenules had formed on the feet, and the paralysed parts were the seat of a hard œdema extending as high as the loss of sensibility. The urine was not albuminous, and the kidneys were healthy. Effusion into both knee-joints occurred a month after the onset of the paraplegia, sufficient to elevate the patella from the condyles. After death one of these joints was found to contain about

two ounces of purulent dark-coloured liquid. The synovial membrane was thickened, infiltrated, and indurated, and its fringes were opaque and purulent in aspect. The cartilages were covered by flakes of pus. The inner aspects of the condyles of the tibia and femur were entirely deprived of their cartilage, and the denuded bony tissue was porous and friable. The other knee-joint only contained a quantity of lemon-coloured liquid. The marrow of the bone in the vicinity of the joint most affected had undergone fatty change, and the bony tissue presented all the signs of osteitis.

It is probable that cases similar to this have led to the prevalence of the opinion, which is very common among French authorities, that all acute affections of the spinal cord are "rheumatic." The arthritic changes are not uncommonly regarded as the manifestation of acute rheumatism, when they are really secondary to the nervous affection.

VACCINATION IN LEEDS.

THE vaccination officer for Leeds, Mr. Holmes, has presented to the board of guardians for that township a report on his proceedings during the year 1877, from which the following figures are taken. The births registered within the township numbered 3198. Of this number, 2811 were vaccinated (87·8 per cent.); 312 died unvaccinated (9·6 per cent.); in 17 cases the vaccination was postponed on medical certificate (0·5 per cent.); 52 children had been removed to other towns, but of 9 of these it had been practicable to give information to the vaccination officers of the places to which they had been taken; and five parents refused to obey the law, three of them having been fined for previous refusals. Thus 98·4 per cent. of the births occurring during the year were accounted for. Careful and excellent work such as that shown by this return, carried out over a period of fifteen or twenty years, and assuming that the vaccination obtained generally is of a kind to be expected in the public stations of Leeds, would put a population in such a state as to protection from small-pox that the disease would become a pathological curiosity among it.

A SPECIAL MEETING of the Senate of the University of Dublin was held last Tuesday for the purpose of conferring the degree of Doctor in Law, *honoris causâ*, on twelve distinguished members of the British Association, in accordance with a recommendation from the Board of Trinity College. The following are the names of those who received the degree:—William Spottiswoode, Henry John Stephen Smith, Peter Julius Cæsar Janssen, Maxwell Simpson, Alexander William Williamson, John Evans, John Lubbock (Bart.), Joseph Dalton Hooker, William Henry Flower, Thomas H. Huxley, Wyville Charles Thomson, and James Thomson.

THE Registrar-General's return of deaths in London last week wears a more favourable aspect than that which has characterised similar documents of late. The number of deaths registered was 1517, against 1694 in the week previous. Zymotic diseases were less fatal. Small-pox carried off 9 persons, measles 10, scarlet fever 27, diphtheria 11, whooping-cough 60, different forms of fever 17, and diarrhœa 263; these 397 deaths being 66 below the corrected average number from the same maladies in the corresponding week of the last ten years.

THE *United Service Gazette* reports that Surgeon-Major Oliver delivered a lecture on the 16th inst., at Hythe School of Musketry, on Cavalry and Infantry Equipments; and brought forward some accoutrements that he has himself designed, some of which, we are informed, are likely to be adopted in the army.

AMONG the projects for the civil government of Bulgaria by Russia it would appear that a scheme for a public-health administration, under a specially constituted medical department designed by Prince Tcherkaski, had a place. It is now officially announced that this scheme will not at present be put in operation, but that the military medical men attached to the army of occupation will be required to advise upon all matters relating to the public-health requirements of the province.

THE Romford Board of Health determined at a meeting on Wednesday last to continue to light their town with oil instead of gas. It appears that though gas is admitted to be less troublesome than oil, the use of the latter has resulted in a considerable saving annually on 110 lamps. Romford must be the only town thus lighted within many miles of London, and affords a curious instance of what may be called retrograde local self-government.

A *conversazione* was held last Monday at the Royal College of Surgeons in Ireland, to which a large number received invitations, including the members of the British Association attending the annual meeting in Dublin. Ladies were present in considerable number, and some excellent music added its attractions to what proved a very enjoyable evening.

A LARGE number of distinguished guests, including members of the British Association, received invitations to the dinner given on Monday, the 19th inst., in the College Hall, Kildare-street, Dublin, by the President and Fellows of the King and Queen's College of Physicians in Ireland.

THOSE of our readers who read a leading article on Cyprus that appeared in the *Times* of the 20th, will perceive that the suggestion of THE LANCET as to sending out a special medical commission is based upon general as well as scientific grounds.

DR. W. S. PLAYFAIR, F.R.C.P., Professor of Midwifery at King's College, started last week for Coburg, in order to be present at the approaching accouchement of H.R. and I.H. the Duchess of Edinburgh.

SICKNESS IN THE RUSSIAN ARMY OF THE SOUTH.

RECENT information from Russian sources, and particularly a communication of Dr. Köcher, the principal medical officer at head-quarters of the forces south of the Balkans, to the *German Medical Gazette* of St. Petersburg, enables us to form a definite notion of the extent to which the Russian army of the south has suffered from sickness. At the time when the treaty of San Stefano was signed, the position of the forces south of the Balkans must have become grave in the extreme. Sickness had so rapidly increased among them, that unless some important change in the state of things had been made, its entire disablement, it is to be inferred, had become imminent. At the time, indeed, when the treaty was signed, an advance into Constantinople or peace had become a necessity, apparently, if the army was to be saved from disaster. During the spring and at the beginning of summer the number of sick among the Russian forces had become so large that all available hospital accommodation was exhausted, and something like a panic was beginning to spread in the army in presence of the blocked hospitals and the extension of typhus. Some relief to the hospitals was obtained when, from the advance of the troops to the vicinity of Constantinople, it became possible to send away some of the sick to South Russia by sea. But it seems doubtful whether even this relief would have sufficed to stave off disaster, had not an

interruption of hostilities between the Ottoman and Russian Governments happened.

According to Dr. Köcher, the number of sick at one time amounted to 50,000, and the hospitals of all sorts were so gorged that many of the patients could not be removed from their quarters and tents, and had to remain in association with their healthy comrades. This state of things exercised a very evil influence, not only on the health of the soldiers still fit for duty, but also upon their spirits. If the state of things had continued, he adds, it would presently have become impossible to exercise any supervision over the great accumulation of sick. At this period the daily attacks of illness among each division ranged from 100 to 150 daily, and the crowding of the hospitals was so great that buildings designed to receive four or five hundred were made to receive over a thousand, and even the huts of peasants used for hospital purposes had to be packed with sick in like fashion. It was early found impossible to obtain relief from this hospital deadlock by land. The difficulties which were experienced in transporting across the Balkans munitions of war and food in sufficient quantities for the requirements of the army presently made it evident that no system of transportation of the sick to Russia by this route could be organised which would meet the increasing necessities of the army, and the sole hope in this respect of avoiding disaster and of freeing the army from the number of sick which was rapidly paralysing it, rested in gaining such a position on the Black Sea or Sea of Marmora as would admit of the sick being transported to South Russia by sea. The position presently occupied by the Russian forces before Constantinople, with their left resting on the Black Sea and their right on the Sea of Marmora, admitted of a service of sea-transport being organised which was quickly taken advantage of. In THE LANCET for August 10th we gave some particulars as to this service. We now learn from Dr. Köcher that 29,000 patients had been transported by the sea-route to South Russia up to the 17th July, and that of this number 25,269 had been so sent between the 27th May and the date first given. The sick from typhus are sent to Theodosia. Now that the evacuation of the sick by sea has proceeded to the extent above stated, and the over-packing of the hospitals removed, the daily rate of sickness in the forces south of the Balkans has fallen from 100 to 150 in each division to from 20 to 25.

North of the Balkans the sick of the forces there are sent by various routes to Rustchuk. At Rustchuk they are transferred to steamers and carried to Galatz, where they are landed, received into sanitary trains, and transferred first to Bendem and thence to Russia. The sick transport service on the Danube is carried on by four large vessels, belonging to the company of the Danube, and fitted up with every requisite for hospital purposes. The number of the sick sent from Bulgaria by way of Rustchuk is not stated.

NOTES ON THE PARIS EXHIBITION.

(From our Roving Correspondent.)

LIGHTING AND WARMING.

OUTSIDE, but bordering upon the province of medicine proper, there is much in Paris and its Exhibition which is of great interest to that section which is the guardian of the public health. The changes which have been effected of late years in the methods of lighting and warming have a most important hygienic bearing. An economic consumption of fuel means not only a saving of money, but, what is more important, a less flagrant fouling of the atmosphere, rendering it less poisonous and less inimical to cleanliness. Dwellers in London, of all places in the world, must long for the time when science shall have freed them from the blacks and an excess of carbonic acid, and when frequent ablution of the skin and garments, in which we take rather a questionable pride, shall have become less imperative. We are the cleanest of nations because our many grimy occupations, and our cities with loaded atmospheres, render the act of cleansing a frequently recurring necessity; and when we travel abroad, to the Swiss mountains and other places where never "black" is seen, we find it inconvenient to lay aside our luxurious habits, and clamour for baths in a way that proves bewildering to hotel-keepers and others. It is certain that in old times, when we manufactured less by the aid of coal-bred steam, our ancestors washed less, and it may be that the advance of science will make our cleanliness more natural and less artificial than it is at present.

Within the past few years several circumstances have conspired to turn our attention very seriously to the important subjects of lighting and warming. First amongst these we must reckon the spreading of a knowledge of some of the principles of hygiene for it is certain that the paramount necessity of fresh air and plenty of it is now most widely appreciated, and that a great portion of the public look with aversion upon places of public resort which are lighted and heated in a manner that is prejudicial to health. The numerous strikes in the coal trade, and the enormous price for our commonest fuel which was demanded only a few months since; the introduction of mineral oils from America, and their general employment for lighting, heating, and cooking; the large use made of coal-gas for cooking and heating purposes; and, lastly, the introduction of the electric light, have all conspired to revolutionise our notions upon this subject.

Last year I had occasion to direct the attention of readers of THE LANCET to the successful lighting of the Gare de Lyon by the electric light, and now I can confirm that which one has known by report, that the success obtained in the illumination of the new Avenue de l'Opéra is complete in every way. It is impossible to believe that those who have become accustomed to the clear bright light given by M. Joblochkoff's arrangement will ever be contented to return to dim yellow gas-lights, which seem, by the side of their electric rival, merely to make darkness visible. The employment of double opalescent shades has served not only to dim the excessive brightness which might have proved destructive to the eyes, but, by diffusing the light more generally, has done away with those heavy shadows which hitherto have been fatal to all systems of electric lighting. I doubt whether the height of the lamps is sufficiently great, and whether a more economic use of the light might not be effected if the lamps were hung over the centre of the street by means of cords stretching between the eaves of the roofs of opposite houses. One electric light, which is said to equal some hundreds of gas-jets in illuminating power, is stated to give light sufficient for working purposes within a radius of 100 yards, which corresponds to a superficies of more than 3000 square yards. Such a light is produced at present by means of Gramme's electric machine, and for the rotation of the machine an engine of two and a half horse power is necessary. Notwithstanding this the light is economical, and, of course, has many other advantages, not the least of which is that it takes no oxygen from the air.

If the introduction of the electric light has caused the shareholders in gas companies to tremble for their dividends, the said shareholders have much to console themselves with, for it would seem that we are only just beginning to understand the advantages of employing gas instead of coal for a variety of purposes. The Compagnie Parisienne du Gaz makes a very interesing show at the Exhibition. Here are gas-engines and gas-stoves in great variety, and the various valuable substances which are extracted from what were formerly known as the waste-products of our gas-works are shown in a manner which is most instructive. The number of gas cooking-stoves exhibited is very great, and first amongst these we must mention the "Rolissoire Automatique," exhibited by M. Petit Jean. The apparatus is exceedingly simple, and consists of a circular vessel of turned iron about two feet high and one in diameter. The gas-jets are arranged in parallel lines down one side of the apparatus. Opposite these is a door, and in the roof is a rotating screw ventilator which is kept constantly in movement by the heated air escaping. The meat to be roasted is suspended from the centre of the ventilator, and is thus constantly turning in front of the lighted jets. The rate of rotation, and the heat to which the meat is exposed, are regulated entirely by the door. The best roasting is done with the door open; but if it be necessary to roast quickly the door is shut. The open door also gives more force to the current of air escaping from the top, and thus the rate of rotation is quickened. The price of this simple little contrivance varies from twenty-five to thirty-five francs.

M. L. Listard shows also an excellent gas cooking-apparatus, by means of which roasting, baking, or any other

culinary process is easily effected. The gas roasting-apparatus shown by Louis Legrand and L. Vielliard et Cie. are of somewhat similar construction.

In the application of gas to culinary purposes, Great Britain is not behind other nations. Messrs. Leoni and Co., of the Strand, exhibit a large assortment of gas cooking-stoves, the excellent quality of which I have had an opportunity of mentioning on previous occasions. John Wright and Co., of the Essex Works, Birmingham, are also well represented, and on their stand are exhibited stoves suitable for the poor, and at a most reasonable cost, as well as others capable of turning out a large dinner and providing for the wants of a club or institution. Amongst the minor purposes for which gas is now largely employed may be mentioned the heating of laundresses' irons and the heating of water for bathing purposes. The number of gas baths shown in the Exhibition is very large indeed, and it is almost impossible to particularise any of them.

Amongst cooking-apparatus we must mention the excellent portable ovens made of brick-earth, and exhibited by Delpeuch, of Paris. These ovens are said to be exceedingly economical, since they retain all the heat which is imparted to them, and give it out slowly and equably without heating unduly the apartment in which they are placed. It is also claimed for them that articles cooked in them are more agreeable in flavour than when cooked in metal ovens. On this point, however, we must reserve our opinion.

The gas heating stoves are fully as numerous as the cooking stoves, and in this branch of manufacture Messrs. Wright and Co., of Birmingham, are well in the front rank. Their gas reflecting stoves are very numerous, and the designs of some of them are so elegant as almost to compensate for the loss of the "blazing hearth" which Englishmen so dearly love. The "Imperial" gas ventilating stove is something like the well-known stove of Captain Douglas Galton—in principle, but not in outward appearance. The products of combustion are taken out of the apartment by means of a flue on a level with the floor, and a special shaft for fresh air is provided. For those who wish for "a sight of the fire" there are gas burners made of fire-clay moulded so as to imitate logs of wood. Into these logs strips of asbestos are inserted, and thus a pleasant glow is obtained. A very ingenious contrivance is the fire-screen stove manufactured by this firm. In outward appearance it exactly resembles an ordinary fire-screen, and is intended to stand in front of the fireplace. The gas burner is a straight bar running the whole width of the stove. The interior of the stove is divided by a plate running parallel to the front, and rising to about two-thirds of its height. The burned air is thus made to pass up the front of the stove, descending at the back and then rising again by the flue. This stove seems to be very sound in principle. It is three feet high and two feet wide; and its cost is but trifling.

Messrs. Musgrave, of Bond-street, have a large show of slow combustion stoves of elegant design; Messrs. Barnard, Bishop, and Barnard exhibit their well-known "Norwich" slow combustion fireplace; and Messrs. Steel and Garland show their excellent "Wharncliffe" grate, which probably gives out a larger amount of heat than any other showing an open fire. The combination of the principles of radiation and convection of heat in this grate is very happy, and deserves to be appreciated.

Among the curiosities of this department is an apparatus for using the heat of the sun for purposes of cooking. It is very simple, and is the invention of M. Mouchot, a French missionary. It consists of a deeply concave reflector, which admits of being always turned towards the sun. In the centre of this reflector is fixed a cylindrical glass vessel, upon which the sun's rays are directed by the containing reflector. In tropical climates, in sub-tropical climates, such as Algeria, and even in the south of France, it is found possible to prepare coffee and even to cook meat with this exceedingly simple machine, which in one respect, the consumption of fuel, certainly eclipses all others.

The Pyrophore is an ingenious domestic toy exhibited by Messrs. Simondet, of Paris. In it we have a highly refined mineral oil, used as the source of light, and this is ignited at will by making the connexions of a zinc acid battery, which causes the incandescence of a fine platinum wire placed in the immediate neighbourhood of the wick of the lamp. It is intended merely to serve as a readily available source of light for smoking-rooms and for "night-lights." It will, perhaps, find favour in France, where the tax on matches is very high.

It is needless to say that mineral oil holds a very prominent place in an exhibition of lighting and warming apparatus, but I failed to notice any very novel applications of it. M. T. Noel, of Paris, shows a variety of cooking-stoves heated with mineral oil. MM. Maris et Besnard exhibit some very ingenious parabolic reflectors with which they have fitted many mineral oil-lamps used for public lighting. The number of towns in France entirely lighted by mineral oils is already very great, and this number is said to be on the increase. The only considerable town in England which is lighted with mineral oil is, I believe, Winchester, and, both on the score of efficiency and expense, the authorities of that town are well satisfied with it.

MM. Darte Frères show a petroleum lamp which is said to be absolutely safe. It has two wicks—one, which may be called the oil wick, is coarse, thick, and plaited, and forms in some sort a stopper to the oil vessel, into which its lower end penetrates. The flame-wick is circular, and its lower end merely rests upon the upper end of the oil-wick so that the oil cannot have any direct communication with the flame, and thus all risk is reduced to a minimum.

Messrs. Rosser and Russell, the engineers of Charing-cross, exhibit several contrivances for heating and ventilating. Their "low temperature air-warmer" is an apparatus upon the construction of which much thought has been bestowed. It is of iron, the outside being covered with laminated ribs, so as to enlarge the radiating surface to a maximum degree. The main point of interest in the apparatus consists in the fact that the smoke escapes at its lowest part. Now, the rate at which heat is communicated to the air by any heated surface depends upon the excess of the temperature of that surface above the circumambient air, and it is obvious that when the smoke escapes by any upward out-take, the flues carrying it off are surrounded by the hottest of the circumambient air (that previously heated by the lower parts of the apparatus). In this machine, however, the hottest of the smoke is brought into contact with the coolest of the air, and thus is made to give up a maximum quantity of its heat. A stove of this description, burning eighteen pounds of coal per hour, is said to be able to heat 3000 cubic feet 60° per minute, or about seven-eighths of the ultimate calorific value of the average coal.

MM. Giraud et Cie., of Lyons, show an apparatus for charging air with the vapour of mineral oils, and thus rendering it combustible. It consists merely of a contrivance for passing air over a large evaporating surface saturated with the vapour of the oil employed. It is well known that air thus charged can be employed in the same manner and for the same purposes as coal-gas.

Closely allied to the subject of heating, and scarcely less important for manufacturing purposes, is that of cooking and refrigerating. The freezing machine exhibited by MM. Raoul, Pictet, et Cie. is of great interest. The cold is produced by the evaporation of anhydrous sulphurous acid, and the manufacturers claim for this machine that it is without danger, and works at a low pressure; that the sulphurous acid has no deleterious action on the machinery, and can be employed as a lubricator for the piston; that its cost of working is small, and that the space which it occupies is very limited. The machine is to be seen in action at the south-eastern extremity of the Exhibition. The refrigerator consists of a tubular cylinder placed in an iron tube. This tube is filled with an uncongealable liquid (salt water), and in it are placed the metal cisterns containing the water to be frozen. The evaporation of the sulphurous acid in the cylinder produces the necessary cold, and its vapour is drawn into a piston, where it is condensed and driven back again, to be again evaporated, and so *da capo*. These machines vary in price from £250 to nearly £5000, and the amount of ice producible varies from 15 to 1250 kilogrammes per hour.

(From our Paris Correspondent.)

IV.—THE BRITISH SECTION (CONTINUED).

Half way between Class 14 and the furniture gallery is to be found the exhibition of bath-chairs, invalid-couches, self-propelling chairs, and perambulators. Mr. John Ward, of Leicester-square, London, has not exhibited a complete collection of the various models of lounging-chairs, invalid and spinal carriages, rising-beds, dentist chairs, which can be seen in his well-known establishment in London. Evidently he has been hindered by want of space. But the three or four models he exhibits, and especially his chair for carrying invalids up and down stairs, suffice to show the

excellence and ingenuity of his manufacture, and maintain his reputation. Mr. William Hamilton, of Brighton, has exhibited his "grasshopper" couches of two models. The chief mechanism of these couches is the adaptation of a telescopic screw, which enables any position to be given to the patient. The mechanism is simple, and the whole couch is light, and easy to move. The model No. 2 is a more elaborate and complete one, with the same mechanism, the couch having a pair of shifting handles, a cushion, and a footstool. Mr. George Henry Harris, of Birmingham, has exhibited in this department some very striking specimens of ingenious workmanship. He shows a chair which may be arranged so as to serve as a pair of stairs, a couch which permits the invalid or occupant to assume various positions, a chair the back of which can be fixed at different inclinations, an easel and work-table combined, and other minor objects of great interest and use.

In the furniture exhibition of Messrs. Peyton and Peyton is to be found an invalid lift shown by Messrs. Child and Hinde, of Euston-road, London, and which is well deserving of notice on account of its lightness, facility of application, and cheapness. It consists mainly of two stretcher poles, which are made to connect at the head and feet of the patient by two iron rods, whilst linen bands are also passed under the patient and serve the same purpose. The stretcher can be made rigid by turning the iron rods with a key. By means of a pair of uprights fixed in a base at the head and feet of the patient, and a pole connecting the uprights, and on which is placed a webbing connected with the stretcher poles, the mechanism is complete, and all that is left to be done is to apply a handle to one end of the long pole, and to lift the patient gently up by turning it to the right. This handle can be secured at a given height, and the patient kept suspended as long as may be necessary. The lift can be placed upon any bedstead, and when done with can be folded up into a small compass. Its uses are similar to those of invalid lifts generally—in cases of accidents, great pain, bed sores, &c.; but one of its important merits, it is stated, lies in the fact that one person can employ it and raise the patient from the bed to a horizontal position.

Returning to the special quarter of Class 14, we find a model and designs of a method of hospital construction by Mr. Henry Greenway, of Plymouth. The main idea of the plan consists in the construction of an outer building containing a smaller one made of glass or enamelled sheet-iron and glass. The space between the two forms a series of corridors. The internal building is divided longitudinally, and subdivided transversely into compartments, each compartment being intended to receive only one patient. The ventilation is secured by means of inlet ventilating flues conducting air through the floor-gratings, of extra inlet ventilators opening over the doors of the compartments, and outlet ventilating flues with a hot-water pipe in the partition. The heat from this pipe increases the draught. The warming is ensured by means of hot-water pipes. This method of hospital construction seems, at a first glance, rather complicated and difficult to realise. It is, however, very elaborate and well studied, and the author of it claims numerous advantages for his scheme. Each patient is surrounded with air uncontaminated by himself, his fellow-patients, or by the building. All the portions of the compartments are made of non-absorbent materials, and can be washed. The patients are isolated, and yet can see and converse through the glass partitions, and each one of them can get the amount of ventilation he wants.

Near by we find Messrs. Leslie and Co.'s exhibition of almondised cod-liver oil pills, medicated plasters, and pliable tape plaster. The almondised cod-liver oil used in the Brompton Consumption Hospital is a very good preparation, as it renders the oil palatable and easier to digest by the addition of an infusion of amygdal oil. A great many people who cannot bear the taste of the fish-oil must consider it quite a luxury to have its taste thus nicely disguised, whilst to others of a weak digestive system it must also prove very acceptable. The same remarks apply to the almondised castor-oil. The pliable tape looks very supple, and is said to keep well in any climate. The other pharmaceutical plasters all seem of excellent quality.

Messrs. William Mather, of Farringdon-road, London, have a good case of feeding-bottles for infants and invalids, deserving to be noticed for cheapness and quality; medicinal plasters of excellent manufacture; and a permanent marking ink which they call "Nigrine."

The Liverpool Spun Oakum Company have prepared a special antiseptic dressing which they designate by the name of Stypium, and to which they call the attention of the profession. It is manufactured from new and unworn materials, contains none of the impurities which might exist in the carded oakum, and is said to have been tried with success in hospital and private practice. The cost of it is very small.

In Messrs. Longdon and Co.'s case are to be noticed some excellent elastic belts for pregnant women, elastic stockings, and various other elastic appliances for the knees, legs, and ankles. The materials seem of the best, and the work looks very fine.

Mr. Milward has exhibited an interesting collection of needles for the surgeon. Every sort is represented, and appears well manufactured.

Messrs. Robinson and Sons, of New Brompton, near Chesterfield, have exhibited some beautiful specimens of lint, which attract the attention of French and foreign surgeons. They look very soft and silky. Their flax and cotton samples are equally good. These exhibitors especially draw the attention of French medical men (who employ the thready French lint) to their cheap cotton lint, which is employed in the majority of English hospitals, and which is cheap and easy to apply. They lay great stress on the care they take to rid the lint of chlorine, acids, or other irritating substances. They have also a collection of bandages very remarkable for their flexibility and facility of application. They look comfortable to wear, and ventilation must take place better with them than through a more closely-woven tissue.

The same praise has to be given to the felt and woollen materials shown by Messrs. R. R. Whitehead Brothers. Their spongio-piline and impervious piline, their filtering sacs, their felt for plasters and chest-protectors, all seem made of the very best material. I see that they call the attention of the French medical men more especially to the spongio-piline as a good substitute for hot and cold "cataplasms," they being aware that spongio-piline is quite unknown in French medical practice.

In another part of the Exhibition, but still coming under Class 14, are to be seen the various preparations of pineoleum &c. shown by Mr. S. Rothentheim, of Euston-road, London. His exhibition is very picturesque, with its windows of different shapes and many coloured blinds. These blinds apply to any rooms or public halls, verandahs, billiard rooms, churches, or railway carriages. They are exceedingly light, pervious, and easy to keep clean. Those for external use are made impervious. Being made of Panama straw and pinoleum, they are bad conductors of heat, and are superior in this respect to blinds of silk, wool, or brown holland. The exhibitors show many other descriptions of blinds, fire-screens, &c.; but, with special interest to hygiene, I must mention their preparations of Panama straw for internal boot-soles, which are pervious, light, and can keep well; their abdominal Panama belts, which are very flexible and soft, pervious to cutaneous perspiration, and declared to be highly superior to "iron slips and whalebone;" their belts for horseback; chest protectors; straw respirators, which are not subject, they say, to get spoiled and corroded like metal respirators; visors, which keep the eyes cool; and even their bands of Panama straw for lining the inside of hats which, according to them, "must appear to the most superficial observer to be much more practical and in conformity with the laws of hygiene than bands of leather, which increase the perspiration of the head and prevent its evaporation, and must thus cause headache and other complaints."

If Class 14 is not numerically represented in the British Section as one might have wished and expected it to be, on the other hand, Class 47 has a very extensive and most satisfactory display of chemical and pharmaceutical products. The manufacturers of acids, alkalies, salts of all kinds, sea-salt, and products extracted from "mother-water," wax and fatty substances, soaps and candles, raw materials used in perfumery, resins, tar and the products derived from them, essences and varnishes, coating substances, blacking, objects made of india-rubber and gutta-percha, dyes and colours, &c., are in great number, and have taken great pains in getting up elegant cases, and gathering exhaustive collections of materials. The mineral waters and natural and artificial aerated waters are well represented. As to raw materials used in pharmacy and medicines, simple and made up, our best manufacturers have worked well for the occasion, and have exhibited products which, in respect both to novelty and excellence, cannot be surpassed by any other section of the Exhibition.

First, if we follow an alphabetical order, we meet with the case of Messrs. Allen and Hanburys, of Lombard-street. Nothing can be more gratifying to the sight and more attractive to the taste than their collection of jujubes, prepared by a special process. The tints are very clear and brilliant; the paste is not adhesive; and it seems that the only difficulty is to make a choice amongst the great variety of mixed fruit, magnum-bonum, liquorice, French pine, rose, black currant, &c., in order to clear one's voice or soothe one's cough. The glycerine pastilles form a very elegant and tempting preparation. Messrs. Allen and Hanburys' cod-liver oil is also shown to great advantage in bottles of various size and shape; the exhibitors have given a special place to this preparation of theirs, which they import from their own manufactory in Norway, and which is not subjected to any process of filtration.

The case of Messrs. George Atkinson and Co., of London, contains a collection of choice and excellent samples of the usual chemical productions, such as refined camphor, resublimed iodine, iodide and bromide of potassium, bromide of ammonium, bromide of cadmium, &c. They have also some very fine oils—notably their expressed oil of almonds, and their oils of cloves and of cubebs.

Messrs. Baiss Brothers and Co. also exhibit choice specimens of drugs, amongst which I noticed particularly their fine samples of rhubarb, jalap, and calumba root; coriander, stramonium, and cubeb seed; guaiacum, benzoinum, ammoniacum, assafœtida, myrrh and kino gums, and their chinchona bark of the three sorts. Their powders are remarkably fine.

The absolute phenol and other preparations of carbolic acid, exhibited by Messrs. Bowdler and Bickerdike, of Lancashire, are worthy of special notice. They manufacture a preparation of glacial and granular phenol, to which they have given the name of absolute phenol, and which has been experimented on with success in several of the large hospitals of England and the continent. Professor Lister finds it less irritating for antiseptic dressings than the other preparations containing cresylic acid. The granular condition of this preparation obviates some of the inconveniences of glacial carbolic acid. Glacial carbolic acid must be melted for use, and, on the other hand, the expansion of the solid mass under the influence of changes of temperature may cause an explosion of the vase containing it. It is not so with the granular preparation, which is therefore especially suitable for naval supplies. It is prepared from coal tar, and yet it is said to be as pure as the one obtained artificially by the distillation of salicylic acid and caustic lime. It has the characteristic odour of phenol, without its smell of tar, and is more completely soluble in water than common carbolic acid. It may be more especially used for internal purposes, but for all external and surgical applications it can supersede ordinary carbolic acid. Moreover, the price of it is very low, and it may consequently be adopted for the preparation of sulpho-carbolates and other products derived from carbolic acid. Messrs. Bowdler and Bickerdike have also exhibited crystallised and liquid carbolic acid of all qualities for medical and manufacturing purposes; carbolic and cresylic acid for disinfection; coralline or aurine (the orange colour afforded by phenol when treated with oxalic and sulphuric acid); picric acid, &c.

Mr. Broomhead, of Aberdeen, has several preparations of his own, amongst which must be mentioned his cod-liver oil emulsion, with pepsine and hypophosphite of lime, rendered palatable; a concentrated solution of pepsine in wine; and an improved preparation of chemical food. All these preparations, which are very useful in the therapeutics of nutrition, look elegantly and carefully got up.

The "pure chemicals and pharmaceutical products" of Messrs. Burgoyne, Burbidges, Cyriax, and Farries, of London, form an extensive and very fine exhibit. These manufacturers have a large collection of essences of fruit, and the words cherry, pineapple, melon, plum, pear, apple, mulberry, peach, banana, &c., glitter pleasantly on elegant bottles full of essences extracted from the fresh fruit or from compound organic ethers. Their essential oils are also excellent. Their specimens of recently-discovered drugs are very fine, and especially their samples of chrysophanic acid, and their salicylates of quinine, ammonia, potash, soda, and lithia. One of the chief features of their exhibit is the display of about fifty specimens of fine chemical and pharmaceutical products, which they have arranged with great effect. Amongst these may be particularly noticed their podophyllin, their two phosphates of iron, the precipitated biniodide of mercury, nitrate of ammonia, oxalate of cerium, nitrate of baryta, sulphate of nickel, resublimed iodine, chloride of managanesium, bromide of cadmium, and remarkably fine preparations of pyrophosphite of iron, hypophosphite of potassium, citrate of bark and iron, citrate of strychnia and iron, and citrate of quinine and iron. I must not forget their collection of granulated salts, which form such a palatable preparation of drugs, and the number of which has been increased by these manufacturers.

Correspondence.

"Audi alteram partem."

"ON DIPHTHERIA FROM A PREVENTIVE-MEDICINE POINT OF VIEW."

To the Editor of THE LANCET.

SIR,—There are two errors in the statistical basis of Dr. Thursfield's paper on "Diphtheria from a Preventive-Medicine Point of View," which I point out in order that he may revise the tables published in THE LANCET of August 10th. The general results of his comparison of town and country districts in England, as to enteric fever, differed so materially from those obtained by myself as regards Scotland, from thoroughly accurate statistics, and submitted to the Philosophical Society of Glasgow last session in an address "On the Comparative Prevalence of Filth Diseases in Town and Country," that I was led to scrutinise those tables. The result is to show that Table 4, which is entitled "Deaths from Enteric (Typhoid) Fever per 100,000 of Population in ten large Towns and ten Rural Counties," really includes the other continued fevers. The death-rates for the towns are those given by Dr. Farr in a table headed "Deaths and Mortality from Fever in Seventeen large Towns," in his Annual Appendices (not accurately transcribed, however—e. g., Sheffield, 1875, ought to be 120·2 in place of 20·2). The death-rates for the counties are calculated from another table of Farr's, headed "Deaths in each of the Counties of England from Fever (typhus, enteric or typhoid, and simple continued) in the year 1876 and ten previous years." In both cases the death-rates for 1877 are derived from the Quarterly Returns, from the columns headed "Fever."

This leads me to the second error, and this exists in Table 3 as well as Table 4. While the town death-rates are calculated from the population as estimated year by year, "those of the counties, as practically stationary, are taken from the census of 1871." This is a most unsafe assumption in any case, but it becomes quite fatal to accuracy when we find that those counties were not "practically stationary" between the census of 1861 and that of 1871. In Essex there was an increase of 16 per cent. on the population of 1861, in Kent of 15·2, in Sussex of 14·7, in Hampshire of 12·2, and in the other counties of from 6 to 2 per cent.

Dr. Thursfield will find that he cannot ascertain from the English Registrar-General's reports the number of deaths from enteric fever alone in the towns, excepting London, which forms a registration division by itself. For the registration counties he may. If he can get the information privately from the Registrar-General, or the medical officers of health of these towns, and otherwise re-adjust the figures in Table 4, and the diagram founded thereon, and then oblige your readers by reproducing them as corrected in your columns, I shall be much surprised if they will bear any other interpretation than that which I derived from like statistics regarding Scotland, that enteric fever, as well as diphtheria, is more fatal in rural districts than in large towns.

If you will allow me to quote the moral of this conclusion from the address referred to, it may be found not inapplicable to England as well as to Scotland:—"Everything is left to chance in the country. The bounty of nature there is such that no improvidence can entirely squander it, as the comparative freedom of the country from acute pulmonary diseases shows; but in towns it is not so. There life would be impossible on such terms; and, as it were under a penalty of death, the towns have, by permanent expenditure on sanitary works, by current expenditure on general super-

vision and the prevention of infectious disease, so controlled the channels of conveyance of the seed to the soil, that in regard to diphtheria, enteric fever, and cholera, a citizen of Glasgow runs much less risk of dying of these diseases than an inhabitant of Caithness or Aberdeenshire, or almost any other rural district in Scotland you choose to name."

I am, Sir, your obedient servant,

JAS. B. RUSSELL, M.D.

Sanitary Department, Montrose-street, Glasgow, August, 1878.

THE TEMPERATURE OF THE HUMAN BODY.

To the Editor of THE LANCET.

SIR,—I would not trouble you with this communication had not Dr. Furnell, Physician to the Madras General Hospital, written to you referring to my paper on the above subject.

His experience seems to give results differing from mine. We are agreed, however, for Dr. Furnell is mistaken when he credits me with having "stated that the axillary temperature in the tropics is always *lower* than in England." What I stated was this—*vide* LANCET 23rd March, 1878:—"The temperature of man in intertropical regions is *not higher* than it is in temperate regions." It is strange that others also should have missed the main point of my communication to THE LANCET—quite a side issue being made prominent.

With regard to my "*impression* that the persistent axillary temperature of the healthy adult man in the tropics is lower than that hitherto given by authority as the average temperature of the body in this country," I suggested how this *apparent* lowering of temperature in hot climates might be explained, but stated explicitly, "this is, however, a matter on which I would reserve opinion." I find it necessary to repeat that "all my observations on the temperature of man have been taken from the axillæ." Dr. Philpot's statement that my experiments were buccal appears to have been an accidental mistake on his part.

Dr. Thornley claims very extensive grounds for the justification of his opinion—corroborative of my views. He says (LANCET, 27th July, 1878):—"I have thus made observations in tropical, sub-tropical, and cold climates, and feel satisfied that the temperature of the body in health is the same, irrespective of race, latitude, or climatic conditions. I have taken some hundreds of temperatures, both of Europeans and of natives belonging to different races, Kafirs, Hottentots, Basutos, &c." But this last statement appears difficult to reconcile with his letter in THE LANCET on the 13th April.

Five years ago I wrote as follows (LANCET, 23rd August, 1873):—"As a result of many thousands of observations on the white man in various climes, with shade temperatures as high as 105°F. and as low as 20° below zero, I have been led to the conclusion that the normal axillary temperature of the healthy adult man is between 98° and 99°F.; in fact, it seems to me that this temperature is as valuable and as constant a characteristic of his human identity as is the structure of his bones. The fact may be already established, but as the idea that human temperature is one degree higher in the tropics than elsewhere has been widely entertained and supported by high authority, I here mention the fact that I have observed." In fine, very many observations led me to believe in the stability of human temperature in health under variable conditions, and to conclude that "it would be very unsafe to assume that man's temperature in hot climates is higher than it is in colder places." And I am glad to find several independent observers now coming forward in support of the same opinion.

Your most obedient servant,

J. P. H. BOILEAU, M.D., Surgeon-Major.

Notley, August, 1878.

CARBOLIC ACID IN SMALL-POX.

To the Editor of THE LANCET.

SIR,—In reply to "F.R.C.P. Ed.," I beg to inform him that the exact proportion of ingredients in the ointment used for small-pox patients was as follows:—Carbolic acid, twenty minims to half a drachm; glycerine, a drachm and a half; oxide of zinc ointment, six drachms. This was freely painted over the face and hands every day, or every other day, with a large camel-hair brush. On the patient convalescing, the dried ointment and scabs came off like a plaster mould from the face. The skin was tender and marked with red spots, which gradually died away; but there was no pitting.

If "F.R.C.P. Ed." studied at Edinburgh, he will probably remember that about fifteen years ago several kinds of preparations were used to prevent pitting. Collodion, solution of caoutchouc, zinc ointment, &c., were thus employed. Owing to their drying and cracking, they all required to be repeatedly applied, so that the atmosphere, or, as we have since learned, the germs in the atmosphere, were prevented from coming in contact with the pustules. In the words of Professor Tyndall, the pustules were thereby "prevented from becoming a nidus for the propagation of septic bacteria." Collodion and the like act mechanically, whereas carbolic acid acts as a direct antiseptic; and the glycerine and ointment, besides being a convenient vehicle for the acid, mechanically prevent the passage of air-germs.

The ointment is useful for many other purposes, which will suggest themselves to the mind of the practitioner. For instance, when the pustules of vaccinia take on an erysipelatous action, the free application of the ointment soon reduces the inflammation.

The abortive treatment of pustules, mentioned by Dr. Lowe, is not altogether novel. About a year ago I read in THE LANCET a letter or article in which great success was shown in the treatment of boils and carbuncles by puncture and the insertion of carbolic acid. The boils were said to abort rapidly by this treatment. I have tried it in three cases with considerable success, but have never seen it applied to small-pox pustules.

Your obedient servant,

August 20th, 1878. THORBURN PATERSON.

To the Editor of THE LANCET.

SIR,—In reading Dr. Eade's "Clinical Lecture on some Medical Uses of Carbolic Acid" in THE LANCET of June 29th, I was somewhat surprised that he did not seem aware that carbolic acid had been employed in the treatment of small-pox. I would respectfully refer him to THE LANCET of July 13th, 1872, page 42, where he will find an article by me under the heading of "Ectrotic Treatment of Small-pox and Scarlet Fever."

I remain, Sir, yours, &c.,

ALEX. T. WATSON, M.D.

Porticus-Strasse, Dresden, August 12th, 1878.

MORTALITY IN METROPOLITAN PAUPER SCHOOLS.

To the Editor of THE LANCET.

SIR,—Dr. Vallance, the medical officer of the District School at Forest Gate, in his letter published in your last issue, throws considerable light upon the high rate of mortality that prevailed in this school during the three years 1875-76-77, when he states that nine of the deaths were of infants aged only two years. The life-table annual rate of mortality at two years of age is 36·1 per 1000, but it depends entirely upon the number of children at that age living in the school during the three years how far the nominal death-rate for the school would be affected by the admission of such young children, and what was the actual death-rate among the children of this age during the three years. At any rate, the useful fact is learned that the main portion of the excess of mortality in the school occurred among the infants under three years of age. It appears that this school contained no children under two years of age in October last, so probably some change has recently been made in the age for admission.

Dr. Vallance closes his letter with a question. He says that the average number of children in the West Ham Workhouse School during the three years 1875-6-7 was 282, and that the deaths in the same period were 3. He asks whether it would be right to say that the average annual death-rate in the three years was 1 per 1000. According to these facts the correct annual death-rate in this school during that period was 3·5 per 1000. Great caution should be observed in drawing inferences from calculations based

upon such small numbers, and the actual numbers should invariably be given as well as the results, in order that the results may be estimated at their proper value.

I am, Sir, &c.,

August 20th, 1878. SCRUTATOR.

OX-GALL IN INTESTINAL OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—While the subject of "obstruction of the bowels" is attracting more than usual attention, I would venture to recommend the use of a remedy which has proved useful in several of these cases. Ox-gall, as drawn from the ox's bladder, or the "purified ox-bile" of the Pharmacopœia, when administered as an enema, is one of the most powerful purgatives we possess. When given it should be diluted with warm water to a slight extent, and a few crystals of "washing soda" may be added with advantage. I have not the leisure to write out any cases at length, but I could prove without a doubt that the above enema has, in at least a dozen cases, acted effectually after every other remedy had failed. Were I called to a desperate case of obstruction of the bowels, I should first of all push the belladonna treatment to its fullest extent, and while the patient is fully under the influence of the belladonna, I should administer eight ounces of ox-gall diluted with eight ounces of water containing a few crystals of washing soda. In conclusion, let me mention that ox-gall, given in five-grain doses twice a day, has proved a very good remedy in profound anæmia dependent on a want of action in the liver, spleen, and other blood-forming glands. In these cases the bowels become more regular in their action, digestion and appetite improve, and the blood-corpuscles increase in number.

I remain, Sir, your obedient servant,

Newcastle-on-Tyne, August 19th, 1878. W. MURRAY, M.D.

PIEDRA.

To the Editor of THE LANCET.

SIR,—The new parasitic disease of the hair, "piedra," described in THE LANCET of August 3rd, bears such a close resemblance to tricoresis nodosa of Hebra that it seems hardly worth a separate place in the vocabulary of dermatologists.

I have had a patient suffering from this rare disease under my care since last April. It is not infectious, as it has never extended beyond the beard, and my carelessness with regard to avoiding it would have rendered me extremely liable to be affected by it had it been so.

Microscopically, it consists of a slight simple hypertrophy of the cellular elements of the more external layers, combined with the existence of a strongly refracting intercellular substance, localised to portions of the hair, from 0·5 to 1 millimetre in length. When this has existed some time in an individual hair, it is liable to break off at the centre of the nodosity, giving the portions the appearance of a brush at their extremities, as described by Hebra. I remarked something resembling a network at a few nodosities, which I at first supposed to be a fungus, but afterwards discovered to be due to the protrusion of the intercellular substance beyond the plane of the cells.

This disease has resisted every method of treatment. This fact, combined with its being non-infectious, and my inability to discover any trace of a fungus, has led me to abandon all theories of its fungoid origin.

I remain, Sir, yours truly,

Tarvin, Cheshire, Aug. 11th, 1878. A. C. MALLEY, M.B.

His Imperial Majesty the Sultan has been pleased to confer the Order of the Medjidié, fourth class, upon Mr. Casson, senior surgeon to Lord Blantyre's mission in Asia, in recognition of services rendered to the army of Ghazi Moukhtar Pasha during the recent campaign in Armenia.

PURTON COTTAGE HOSPITAL (WILTS), erected upon ground given by Captain Wykeham Martin at his and Mrs. Martin's expense, was formally opened on Wednesday in last week, by the Rev. H. G. Randall, Archdeacon of Bristol, in the presence of the leading inhabitants of the neighbourhood.

THE POOR-LAW MEDICAL OFFICERS' MEMORIAL.

We have received the following from the Local Government Board:—

To the Editor of THE LANCET.

SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter dated the 16th ultimo, in which, referring to the memorials of certain of the Poor-law medical officers, transmitted to this department in February last, containing suggestions for an alteration in the present system of Poor-law medical relief, you inquire whether you may hope to receive an early reply to these memorials.

I am to state that the pressure of business in this department during the session just concluded has prevented the Board giving the subject of these memorials the consideration which its importance demands, but that they hope very shortly to be able to communicate their views upon the various points to which attention is directed.

I am, Sir, your obedient servant,

JOHN LAMBERT, Secretary.

Local Government Board, Whitehall, S.W., August 28th, 1878.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent First M.B. (Honours) Examination:—

ANATOMY.

FIRST CLASS.

Shaw, John (Exhibition and Gold Medal), St. Thomas's Hosp
Horsley, Victor Alex. Haden (Gold Medal), University Coll.

THIRD CLASS.

Shearman, Percy Edward, University College.

HISTOLOGY AND PHYSIOLOGY.

FIRST CLASS.

Bredin, Richard (Gold Medal), Liverpool Roy. Inf. Sch. of Med.
Weber, Chas. A., B.A., B.Sc. (Gold Medal), St. George's Hosp.
Maguire, Robert, Owens College.
King, David Alexander, St. Bartholomew's Hospital.
Horsley, Victor Alex. Haden, University College.
Shearman, Percy Edward, University College.
Shaw, John, St. Thomas's Hospital.

SECOND CLASS.

Cantin, Louis Alfred, St. Bartholomew's Hospital. } Equal.
Permewan, Arthur Edward, University College. }
M'Donnell, Denis, King's College. } Equal.
Rake, Beavan Neave, Guy's Hospital. }
Parkes, Louis Coltman, University College.
Kirsopp, Thomas, St. Bartholomew's Hospital. } Equal.
Parker, William Rushton, University College. }

THIRD CLASS.

Bassett, Henry Thurstan, Queen's Coll. Birm. and Guy's Hosp.
Thomas, Walter Duncan, St. Bartholomew's Hospital.
Hoole, Henry, Charing-cross Hospital.
Dickinson, Thomas Vincent, St. George's Hospital.

ORGANIC CHEMISTRY.

FIRST CLASS.

Bredin, Richard (Exhibition and Gold Medal), Liverpool Royal Infirmary School of Medicine.
Rake, Beavan Neave, Guy's Hospital.
Maguire, Robert, Owens College.

MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

FIRST CLASS.

Shearman, Percy E. (Exhibition and Gold Medal), Univ. Coll.
* Shaw, John, St. Thomas's Hospital.
Maudsley, Henry, University College.

SECOND CLASS.

Permewan, Arthur Edward, University College.
Newsholme, Arthur, St. Thomas's Hospital. } Equal.
Rake, Beavan Neave, Guy's Hospital. }

* Obtained the number of marks qualifying for the Exhibition

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 15th:—

Groome, William Wollaston, Monk Soham, Suffolk.
Ladell, Wm. John Simpson, Knockholt Lodge, Greenhithe.
Neale, John Edward, Boundary-road.

The following gentlemen on the same day passed the Primary Professional Examination:—

William Wenmoth Pryn, Guy's Hospital; Sidney Winslow Woollett, King's College.

COLLEGE OF PHYSICIANS IN IRELAND. — At a special examination held last week the following obtained the licence in Medicine of the College:—

John Moore Nichols. | George Stoker.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—PRELIMINARY EXAMINATION.—The number of candidates going in for this examination shows no diminution; indeed, the entries are larger than on any previous occasion. The examination commences on Tuesday, September 3rd, at the University of London, Burlington-gardens, at 9 o'clock A.M.

HOWARD D. REYNOLDS, L.R.C.P. Edin., has been placed on the Commission of the Peace for the borough of Pembroke.

THE Derby Guardians have increased the salary of Dr. Greaves, as medical officer of the workhouse, from £95 to £105 per annum, with the sanction of the Local Government Board.

FIFTY-SIX deaths from zymotic diseases took place last week in Dublin, which included twenty from small-pox, being eight over the number in the preceding week. The new cases of this disease admitted to hospital also show an increase of twelve during the same period.

DONATIONS ETC. TO MEDICAL CHARITIES.—Mr. Charles Seely, M.P., has given £1000 to the Lincoln County Hospital. The Grocers' Company and the Fishmongers' Company have each given £50 to the building fund of the West Ham Dispensary. The Queen's Hospital, Birmingham, has received £200 under the will of Mr. Charles Hallam. Mr. Alexander H. Jenkins has given an additional £100 to St. Mary's Hospital, Paddington. The General Dispensary, Lincoln, has received £180 under the will of Miss Cookson. The late Mr. Patrick Coleman has bequeathed £200 to St. Vincent's Hospital; £300 to the Mater Misericordiæ Hospital; £100 to Cork-street Fever Hospital; and £600 to Asylums for the Blind. The Leicester Infirmary has received £450, and the Leicester Provident Dispensary £300, less duty, under the will of Miss E. Adcock, of Lyston. The Corporation of the City of London have given one hundred guineas to the building fund of the North Eastern Hospital for Children.

EYE INFIRMARY FOR GREENOCK.—At the last meeting of the Greenock Town Council, Provost Lyle said that the late Mr. James Ferguson, sugar refiner, Greenock, who died about twelve years ago, by his will left the sum of £6000 for establishing an Eye Infirmary in Greenock, "to be superintended by a competent and experienced oculist who has made the human eye his study, and to be made available to all classes of society without let or hindrance gratis. This institution should be in connexion with the Greenock Infirmary;" and that said sum be given "for the support of an experienced and qualified eye doctor to attend gratuitously to all who may require his aid, to be appointed by the Provost and Magistrates of Greenock." Since the testator's death considerable difficulties had arisen, and litigation had ensued in consequence; but everything was now settled and the money lodged in the Bank of Scotland, Greenock. The ambiguity of the will, however, would necessitate an application to the Court of Session to define who should administer the fund. After some discussion it was agreed to leave the matter in the hands of the Provost and Magistrates.

RICHMOND DISTRICT LUNATIC ASYLUM, DUBLIN.—During 1877 the recoveries for males have been 41 on the admissions, for females 48, and for both sexes 44; which exhibits a small decrease of recoveries on admissions from that of the previous year. Of the total number treated, the recoveries have been for both sexes nearly 13 per cent., showing a fractional increase of recoveries, as compared with 1876. The percentage of deaths on the daily average number of patients has been 16½ for both sexes. No case of suicide took place during the year. A very large percentage of both males and females were employed either at school or industrial pursuits; a circumstance of considerable importance in reference to the treatment of the insane. Of the 1485 under treatment, 432 were admitted during the year; 375 being cases of a first attack, and 249 discharged. Of these latter 193 recovered, 51 were improved, and 5 remained incurable. There were 1061 patients remaining in the institution on the last day of December, 1877, of whom 234 were married, 647 single, 40 widowers or widows, and in 140 cases it was unascertained. This remarkable disparity, the single being so much in excess of the married patients—a result totally at variance with what is elsewhere recognised,—is corroborated by examining the returns during the past year of the Irish asylums, public and private, which show that the married and widowed amounted in both classes of institutions to 2355, the single to 5491.

BOOKS ETC. RECEIVED.

Surgeon-Major J. H. Porter on some Forms of Extemporaneous Conveyances for Sick and Wounded in Peace and War.
Dr. A. P. Smith: A Report of Fifty-two Successful Cases of Lithotomy.
J. M. Douglas: The North British Railway.
China, Imperial Maritime Customs, Medical Reports, 1877.
Glasgow and South-Western Railway Panoramic Guide.
J. Mansergh: The Thirlmere Water Scheme of the Manchester Corporation.
R. Johnson: A Letter on the Amelioration of the Criminal Law.
B. Latham on Sanitary Engineering.
The American Journal of the Medical Sciences. July.

Medical Appointments.

BURNIE, Mr. W. G., of St. Bartholomew's Hospital, has been appointed House-Surgeon to the Children's Hospital, Dyke-road, Brighton.

BUTTERFIELD, H., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Bradford, Yorkshire, Urban Sanitary District, at £500 per annum for three years.

CALDER, H. L., M.B., has been appointed House-Surgeon to the Burton-on-Trent Infirmary, at £130 per annum, rooms, &c., vice Proffitt, resigned.

CANT, W. E., F.R.C.S.E., L.R.C.P.L., has been appointed Resident Medical Officer to the Royal Albert Hospital, Devonport, at £200 per annum, apartments, board, &c., vice Stamp, resigned.

CARDEW, G. A., M.R.C.S.E., L.S.A.L., has been appointed Junior House-Surgeon to the General Hospital, Cheltenham, vice Paxon, resigned.

CLARK, W. W., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Wellingborough Urban Sanitary District, at £30 for one year.

CLOUSTON, C., M.B., C.M., has been appointed Medical Officer of Health for the Hay Urban Sanitary District, Brecknockshire.

CONNON, C. J., M.B., C.M., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Muker District of Reeth Union, and Medical Officer of Health for the Reeth Rural Sanitary District, vice Mearns, resigned.

CUTHBERTSON, J. M., F.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Droitwich District of the Droitwich Union, Worcestershire, at £120 per annum and extra fees, vice Wills, resigned.

DALTON, F. G., M.R.C.S.E. & L.M., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Ogley-Hay District of the Lichfield Union, vice Clark, resigned.

DAWSON, E., L.F.P.S.G. & L.M., L.S.A.L., has been appointed Medical Officer of Health for the Bocking Sub-district of the Braintree Rural Sanitary District, vice Taylor, resigned.

DODDS, W. J., M.B., D.Sc., has been appointed Assistant Medical Officer to the Royal Lunatic Asylum, Montrose, vice Ronaldson, resigned.

EVANS, Mr. J. W., has been appointed House-Surgeon to the County and County of the Borough of Carmarthen Infirmary, vice Richards, resigned.

FISHER, F. R., F.R.C.S., has been appointed a Surgeon to the Surgical Aid Society.

FLANNERY, J. G., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Ballycroy, co. Mayo, vice Croly, resigned.

FRY, J. F., L.R.C.P.L., M.R.C.S.E., has been appointed a Medical Officer (for Out-door Patients) to the Swansea Hospital, vice Mowat.

MCDOWELL, C. V., M.B., F.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Carlowgraigue, Queen's County, vice F. V. McDowell, L.R.C.S.I.

MCKEOGH, G. F., M.B., M.R.C.S.E., has been appointed Junior Resident Medical Officer to the Royal Free Hospital, vice Gipps, resigned.

MOWAT, G., M.R.C.P.Ed., has been appointed a Physician to the Swansea Hospital, vice Padley.

OULTON, H. W., M.D., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Doonane, Queen's County, vice F. V. McDowell, L.R.C.S.I., appointed Medical Officer to the Baltinglass Dispensary District, Baltinglass Union.

PADLEY, G., L.R.C.P.L., has been appointed Consulting Physician to the Swansea Hospital, upon resigning as Physician.

REES, D. V., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Carmarthen District and the Workhouse of the Carmarthen Union, vice Lewis, resigned.

STEELE, H. F., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Stoke Ferry District of the Downham Union, Norfolk, vice Wheatcroft, resigned.

VICKERSTAFF, W. H., L.R.C.P.Ed., L.R.C.S.Ed., L.S.A.L., has been appointed Medical Officer to the Bollington Medical Aid Society, Macclesfield.

Births, Marriages, and Deaths.

BIRTHS.

CHARLES.—On the 11th inst., at Bellaghy, co. Londonderry, the wife of Daniel Allen Charles, M.D., of a son, still-born.

HETT.—On the 14th inst., at Ledbury-road, Bayswater, the wife of Geoffrey Hett, M.D., of a son.

MURPHY.—On the 13th inst., at Kingsfield, Downpatrick, the wife of G. Wyndham Murphy, M.B., of a daughter.

KELLY.—On the 20th inst., at Plough-road, London, the wife of Bernard Kelly, M.D., of a son.

MARRIAGES.

BASTABLE—AYLWIN.—On the 15th inst., at All Saints', Whitstable, John B. L. Bastable, L.R.C.P.Ed., to Mary Anne, daughter of Herbert Aylwin, Esq.

BUNCOMBE—EATON.—On the 11th ult., at St. Paul's, Rondebosch, near Capetown, Cape of Good Hope, by the Venerable Archdeacon Badnall, John Dobrick Buncombe, M.R.C.S.E., to Harriet Mary, daughter of the late Richard John Eaton, Esq.

DEATHS.

HARTSHORNE.—On the 18th inst., at Broseley, Frederick H. Hartshorne, L.R.C.P.Ed.

KEMP.—On the 13th inst., at Gell-street, Sheffield, George Kemp, M.R.C.S.E., aged 61.

MARRIOTT.—On the 15th inst., at Swaffham, Norfolk, suddenly, of acute inflammation, Hugh Buchanan, youngest child of Robert Buchanan Marriott, Surgeon, aged 5 years and 9 months.

SAWER.—On the 15th inst., at Ipswich, Charles Sawer, M.R.C.S.E., aged 63.

SILLARD.—On the 14th inst., at Dublin, Thomas P. Sillard, L.R.C.S.I., of Glasgow, aged 28.

WHATELY.—On the 16th inst., at Chiswick, George Frederick Whately, M.R.C.S.E., aged 63.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

LOCAL GOVERNMENT BOARD, IRELAND.

FROM the Annual Report of the Board for 1877, it appears that during the year, 465,573 dispensary tickets were issued, and 184,475 visiting tickets, being a decrease of 15,758 dispensary cases, and 4044 cases of persons attended at their own homes, the total expenditure under the Medical Charities and Vaccination Acts amounting to £141,076 2s. As regards vaccination, there were 117,679 cases, 95,008 of the subjects being under one year, and 20,182 above that age. The Irish Cow-pock Institution, which in April of last year came under the control of the Local Government Board, has issued since that date 16,656 points and 756 tubes charged with lymph. Small-pox caused 61 deaths, and although a few cases appeared in various unions, yet the disease did not prevail to any great extent except in Belfast and Dublin.

A Provincial Pupil.—It is not customary for a principal to refuse the use of his books to a studious and careful pupil.

J. H. S.—Consult the Medical Register and Medical Directory.

ACCIDENTAL INSURANCE COMPANIES.

To the Editor of THE LANCET.

SIR,—Some time since a club patient of mine met with a trivial injury. He was insured against accidents in the Railway Passengers' Assurance Company, and made a claim for £40. The Company's agent applied to me. I said it was an imposition, and advised the Company to give him £10, which I thought was ample. They, however, offered £15, and by my advice this was accepted. The result to me was, I lost the man's family and some of his relations as patients. I am assured against accidents in the same Company, and when the time came to renew my premium I told the agent that I thought I was entitled to some recompense for the trouble and worry the case gave me. The answer was, the Company had no correspondence with me, and could not entertain my claim, and that it would be an insult to offer me anything for doing my duty.

I should like to know your opinion and that of the profession, and whether I should press for payment, and, if so, how much. I believe accidental insurance claims are frequently exaggerated, and it is no easy task to do one's duty conscientiously. Yours truly,

August, 1878. L.R.C.P. Lond.

*** If the Company's agent applied to our correspondent, and he gave the Company information and advice, the Company is certainly morally and, we should suppose, legally liable to pay for such valuable medical service.—ED. L.

W. D.—1. The Secretary of State for the Colonies, Whitehall, S.W.—2. Those of a "registered medical practitioner."—3. Hot, and not specially healthy. Very little indeed.

James.—We see no impropriety in accepting such an appointment, provided no undignified conditions are attached to it.

LONGEVITY IN ENGLAND.

THE mortality returns for England and Wales in the year 1876, which have recently been completed, record the death of 183 men and 409 women registered as 95 years old or upwards when they died. Fourteen of the men had reached 100 or upwards, and one who died at Mountain Ash was 106. Forty-three of the women had completed a century of life or more, and one who died at Sedgefield, in Durham, was 108 years old. Their respective ages were: four men and twenty-one women, 100 years; two men and seven women, 101; five men and four women, 102; two men and three women, 103; two women, 104; three women, 105; one man and two women, 106; and one woman, 108. Six of the persons, one male and five females, who had reached 100 or upwards, died in the London districts.

Dr. Day.—The report appeared in the "Mirror" on the 10th of August.

MILITARY TITLES FOR MILITARY DOCTORS.

To the Editor of THE LANCET.

SIR,—In a late number of your journal, when dealing with the subject of military titles for military doctors, you confounded together military *rank* and military *command*. The two things are wholly separate. Let me give you an example. The army pay department have military rank as lieutenants, captains, majors, yet these officers have no command of any kind. If in their regiments the senior combatant officers were killed, or away on leave, the most junior subaltern would command before the paymaster, who is wholly without authority; but his rank is clear and defined. In society the paymaster, who is a major, takes precedence of his commanding officer if the latter be junior to him in rank. It is only on military duty that the most junior combatant commands the most senior non-combatant. The best way to understand the subject is to look on the titles of lieutenant, captain, colonel, general, &c., as if they were titles of nobility, like baron, baronet, or knight. If in a regiment a baronet is a subaltern or other officer, he is junior on military duties to his seniors in the army; but in social life he takes precedence of even a field marshal if the latter be not a baronet or of higher rank. In India we see the whole principle daily at work. The Indian commissariat have three military titles. You may see Colonel Jones deputy commissary-general &c. If in the garrison where he is serving the senior go on leave, a major may command. The commissariat officer is under his command, although a colonel. No difficulty ever occurs. In the same way in the pay department out here we have colonels, majors, and captains. They have no command, nothing to compare in any way with our military authority within our corps. We never hear a word of complaint from them about supersession. Their rank is untouched, although they have no command. You are aware that in Italy, America, Turkey, and Roumania these titles are given to the medical corps, and no hitch occurs. You see then that rank and command are different things, and do not clash together.

I will now say that until we get definite military *rank* (not command) in the army it will be impossible to be contented. I could tell you numbers of stories and instances of gross injustice to us on this head of rank and precedence. I have heard excellent and devoted officers of high rank addressed by their surnames by young subalterns. The same men dare not so address even a major, let alone an officer ranking as full colonel in the army. In the same way every surgeon-major is treated like a brother subaltern, and the young men are schooled into this course. Everyone must have noticed how when a lad joins the army he is prepared to respect the doctors. In a few weeks he is taught otherwise by his brother officers. So long as a surgeon-major allows young lads to address him by his surname, and does not demand all the respect due to his rank, so long will those wretched scenes occur.

For my part I believe it to be impossible to do otherwise than claim these titles. The army now laughs at our sham relative rank. We would be foolish to fail to arm ourselves with the aids that military discipline gives us, and that aid is the military title. The action of America and Italy deserves to be copied thoroughly. It would be popular, and it alone will give its due position to the medical corps. To all who know military organisation, and the system existing in foreign armies, there is not the very least difficulty in understanding this question of rank without command. To-day we are not in the army at all; we are quite out of it. The true way to bring us into it is to give us defined military rank. I venture to say that in a few months after such a step is taken the greatest change would be evident in our happiness *within* the service. I have not the least fear of these titles rendering us less doctors than we now are. On the contrary, we would be prouder than ever of belonging to a profession duly honoured in the service, and not, as is now actually the case, the most neglected and slighted of corps in the service.

Yours &c.

July, 1878. PROGRESS.

Justitia.—1 and 2. No.—3. At the present time it is not illegal for a M.D. of Brussels to call himself "Dr.," especially if "doubly qualified." It is impossible to say whether the Medical Council, in the event of the Medical Bill passing in its present form, will register the degree of Belgium.

Medicus.—L.R.C.P. Edin. is a physician, not "doctor." Mr. —— physician, is the correct description.

TREATMENT OF PNEUMONIA.

To the Editor of THE LANCET.

SIR,—In your journal of August 10th a writer from Worthing criticises Dr. Waghorn's treatment of pneumonia, as given in your preceding number, without other reason than the probable misprint of a figure, and without any medical status or right, that I can discover, for offering any criticism at all, or for being himself trusted with the treatment of such a case. I am, Sir, yours &c.,

W. SQUIRE, M.D.

Orchard-street, Portman-square, Aug. 20th, 1878.

Mr. Moorhead forwards us a long letter, far too voluminous for insertion, relating to the miseries of mercantile marine medical officers, and requesting some "valuable hints and suggestions" as to their amelioration. If the writer will refer to the index of each volume of THE LANCET for the last six or eight years, he will find, we think, the heading "Ship Surgeons" or "The Mercantile Marine" in every one of them; and if he reads the articles to which these headings refer, it will be seen that one at all events of the "influential medical organs" has devoted its energies to the interests of this section of the profession. We have, in fact, always maintained that that service is ill off both in pay and prestige. The Board of Trade is responsible for this unsatisfactory state of things, simply because in the case of surgeons they neglect the duty of ensuring that every officer shipped is competent to perform his work properly, and is in other ways a fit person for the service. But we entirely disagree with the writer that any sort of reform must be commenced by making the surgeon entirely independent of the captain. The rule of the master of a vessel from the beginning to the end of the voyage must for many reasons be absolute in all matters of discipline.

Dr. R. Lawson, (Exeter.)—The communication shall be inserted in our next issue.

CARBOLIC ACID IN SMALL-POX.

To the Editor of THE LANCET.

SIR,—In perusing THE LANCET for the last few weeks, I was pleased to see that others, like myself, had found out the good effects produced by carbolic acid on small-pox. It brought to my recollection a case in which I used it some short time before I saw the good account of its action on that most loathsome disease.

The patient was a middle-aged woman, in poor circumstances; and about the fifth or sixth day of the eruption I saw that she had scratched some of the pustules on the face, so I ordered her a lotion containing one drachm of carbolic acid to twenty of water, and desired her to keep it in a saucer at her bedside, and to apply it to her face with a rag when it itched. But her husband, in his desire to keep her "beautiful for ever," and thinking "that everything that was done was for the cure of the disease," applied it all over the face as soon as it arrived, and several times between my visits. To my surprise, next day, on paying my visit, I was met at the door by the husband, announcing the good effects of the lotion in a most joyous way. To use his own words: "Doctor, that is a most wonderful lotion; it has made her look as if she never had had small-pox." And truly there was a wonderful change, for, although the pustules had not become confluent, they undoubtedly would have been in a few days more had the lotion not been used.

I must say the effect produced by the lotion was quite a discovery on my part. I knew, of course, it was used occasionally to allay the itching and act as a disinfectant, but not that it possessed the power of arresting the disease in this manner. The face on the day before I used the lotion was red and perspiring, and bore the appearance of a patient suffering from high fever; but after the use of the lotion the countenance was natural in colour and had lost the feverish appearance, and I could compare the great change in it to nothing so much as a man who had not been shaved for three or four days and then had that operation performed. The face was the natural colour, clean, but the skin looked rather tubercular, as if something was pushing it up from beneath; but this in a few days disappeared, and she has now recovered without the sign of a pock-pit or mark. I found that the tubercular appearance was apparent, not real, as the skin to the touch was quite smooth; it was, in fact, produced by a certain amount of mottling or darkening of the part of the skin corresponding to the pustule.

I must confess that, after the good effects produced by this weak solution, I must have another trial on my next patient, and watch the result more closely, before I resort to the application of the strong acid as recommended by Drs. Eade and Lowe.—Yours obediently,

Peckham Rye, Aug. 20th, 1878. R. LOCKHART LAWSON.

MYOPIA IN ALSACE.

SHORTSIGHTEDNESS would appear to be on the increase in Alsace. In a College at Mulhouse 50 out of 234 students were, according to a correspondent of *The Times*, found to be affected with myopia; the three higher classes exhibiting the affection in a ratio of 63 per cent. The prevalence of this visual defect is said to be traced to the custom, which largely prevails at the College, of studying with insufficient light.

MEDICAL FEES.

To the Editor of THE LANCET.

SIR,—Would any of your numerous correspondents have the kindness to inform me what the usual fee is for examining a working man and signing the paper usually supplied by emigration companies? I have always charged, what I considered to be, the minimum fee of 2s. 6d. Being told, however, that I was charging more than a certain neighbouring practitioner, I wrote to this gentleman, and received the following reply: "When applied to for an emigration certificate, and the person is known to me, I never charge more than a shilling; if a stranger applies, and I have to examine the person, then I charge 2s. 6d." Ought we not always to examine the applicant when he comes before us, however recently we may have seen him or attended him?—and ought we ever to accept the humble fee of 1s.? If we value our services at this rate, and people take them at our own value, what will become of us?

Yours obediently,

Tywardreath, Cornwall, Aug. 20th, 1878. R. B. HILL, M.B.

G. E. F.—There are many good professional openings at the Cape "up country," if the practitioner does not mind roughing it, and can ride tolerably well. The climate is probably about the best for chronic pulmonary diseases. Articles appeared in THE LANCET of May 18th and 25th on the subject.

Hard-water.—Consult Watts's Dictionary of Chemistry

COLONIAL DEGREES.

M.R.C.S. Lond. and Foreign M.D.—The collapse of medical legislation this year renders it wise to postpone the questions raised in our correspondent's letter. It will, of course, be the most urgent duty of the Medical Council, in the event of a Bill passing requiring the recognition of foreign and colonial degrees, to investigate most carefully the character of the examinations required for obtaining any given degree, and to refuse recognition to any degrees granted after such absurdly defective education and examination as are described by our correspondent in the case of some so-called Canadian medical schools.

Unqualified Assistant.—For the purpose mentioned assistants must be qualified.

Mr. W. J. Farrar.—1. Denman's.—2. Trübner, Paternoster-row.

POOR-LAW EXCUSES FOR NON-PAYMENT OF FEES.

To the Editor of THE LANCET.

SIR,—The Local Government Board lays it down (8 Off. Cir. 85) that "A medical officer cannot require the relieving officer, overseer, or guardians to give him an order to attend to any person whom he may consider to be destitute." There is, therefore, no doubt but that the Board of Guardians are well within their rights, and that Dr. Coleman has no remedy. On the other hand, "a medical officer is not bound to attend upon a sick pauper without an order in writing or print calling upon him to do so." If, however, a medical officer should take upon himself to attend a sick pauper without an order, he would not be allowed to plead the absence of an order in justification of any subsequent neglect. According to 11 and 12 Vict., c. 110, s. 2, it is lawful for the guardians to pay a medical officer for prompt attendance on a poor person, although no order may have been given. Mr. Lumley (from whose Medical Officers' Manual I quote) adds: "Hence a medical officer may render his aid promptly without an order, relying upon the due acknowledgment of his services by the Board of Guardians." But he has no legal claim. It would be possible to say a good deal about the different orders and regulations of the Local Government Board, which appear to be so little understood that if it were not borne in mind that "the law is made for the lawless and disobedient," it would seem wonderful that Poor-law medical officers are not more often in hot water.

Yours obediently,

August 17th, 1878. R. J. S.

To the Editor of THE LANCET.

SIR,—There cannot, I think, be two opinions of the mean and shabby way in which Dr. Coleman has been treated by his Board of Guardians. But he wishes to know what to do. Were I in his place, I should send a statement of the circumstances to the Local Government Board, and also to the Poor-law Medical Officers' Association. Who sent for Dr. Coleman "as district medical officer"? Because the only legal way in which he could be summoned as such was by an order from the relieving officer. The whole matter seems to turn upon this. No hospital, cottage or other, could or would turn away an urgent case, such as a broken leg, from its doors, be the patient rich or poor. There is one passage in Dr. Coleman's letter which seems to point to a possible remedy for the future. He says: ".....or else I must refuse for the future to admit any parish cases." If he has the power of refusing, he should certainly exercise it, *until an order from the relieving officer has been obtained.* In this particular instance I am afraid the Poor Law—and poor enough law it is when applied to medical officers—will be against him; but he knows his Board now, and let him be wary in future.—Yours &c.,

Cardiff, August 17th, 1878. ALF. SHEEN, M.D.

W. R., who forwards some "Observations on the Use of the Muscles," has forgotten to enclose his name and address.

Patrswick should write direct, and ask for an appointment.

Mr. Renshaw.—The most recent reports do not show extension of the epidemic.

"A SUGGESTIVE CUSTOM IN DEVONSHIRE."

To the Editor of THE LANCET.

SIR,—Under the above heading a letter appeared in your issue of the 10th inst. from "Devonshire," and I beg through you to inform the writer that a similar custom prevails in this, the adjoining, county of Somerset. A case in point came to my knowledge about a year ago, previously to which time I was in utter ignorance of the curious physiological effect.

A lady, a patient of mine, being away from home, sent instructions to her housekeeper, an elderly woman, to salt a side of bacon. The housekeeper deputed her daughter, a healthy young woman, upon whom the catamenia were present at the time, to perform the task. The result was that the bacon turned off rancid, and had to be thrown away. I have not heard that the above applies also to butter-making; very possibly, I think, it may do so.

I should be glad to see the matter physiologically explained in your columns.

Yours &c.,

Glastonbury, August 17th, 1878. J. A. BRIGHT, M.R.C.S., &c.

To the Editor of THE LANCET.

SIR,—A lady informs me that when in Scotland some years ago she was about to salt a quantity of butter for winter use. Her aunt suggested she ought not to do it at such a time. The idea was laughed at as superstitious, but the butter proved uneatable.—Yours truly,

August, 1878. FARQUHARSON.

SEA-SICKNESS.

To the Editor of THE LANCET.

SIR,—I see in your impression of last week that Mr. Kebbell says we do not see cases of sickness caused by railway and carriage travelling. I beg to inform him that I have met with numerous cases, and that it is by no means uncommon to meet people who turn bilious (or sick) on riding sideways in a waggonette, particularly when seated over the wheel. When surgeon in the P. and O. Co.'s service I never found anything give so much relief as a tumblerful of warm water with a good dose of salt in it. Morphia, laudanum, chloral hydrate, and chloroform never seemed to me to do any good. Yours obediently,

Erchfont, Devizes, August, 1878. T. SCORESBY-JACKSON, M.D.

Inquirer.—It is the duty of all sanitary authorities to provide some such place, and it is assumed that all ratepayers, of whatever class, have a right to claim the use of such place, and the apparatus, for the purpose above mentioned. Let our correspondent apply at the office of the Sanitary Authority of the district in which he resides.

Mr. R. S. Stewart.—We must refer our correspondent to our advertising columns.

Mr. J. D. Bradburn's paper will be published very shortly.

CARBOLIC ACID IN MOSQUITO BITES.

To the Editor of THE LANCET.

SIR,—Many different applications have been from time to time recommended for the bites of these pests of hot climates, and generally with but very partial success. During my residence and travels in tropical South America I suffered severely from these depredators, and tried many remedies, amongst others solutions of various strengths of acetate of lead, sulphate of zinc, sal volatile, brandy-and-water, &c., and experienced but a small amount of relief. I next tried carbolic acid, using at first a strength of two drachms of the acid to eight ounces of water. I afterwards increased the strength to half an ounce of the acid to eight ounces of water. I found that the application of this lotion to the bites alleviated in a remarkable degree the itching, and also relieved to a very considerable extent the accompanying heat and swelling. This was also the experience of a number of persons on whom I tried the same remedy. If the carbolic lotion be sponged over the face and hands before retiring to rest, the mosquitoes will not bite until the acid be thoroughly evaporated by the heat of the skin; and in order to prevent the too rapid evaporation of the acid, I have mixed it in various proportions with olive oil and glycerine, and thus applied over the face and hands it is the best preventive of mosquito bites with which I am acquainted.

Yours &c.,

August 19th, 1878. J. G. THORNLEY, M.D.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Bastian, London; Professor Rolleston, Oxford; Dr. Squire, London; Dr. Day, London; Mr. Riggins, Leicester; Mr. Carter, Galway; Mr. Dobbin, London; Mr. Gunner, Leuton; Mr. Bright, Glastonbury; Mr. Wright, Leeds; Dr. Aveling, London; Dr. Hawkes, Norwich; Surgeon-Major Bolleau, Netley; Mr. Woodhead, Edgerton; Messrs. Salt and Son, Birmingham; Mr. Farquharson, Stockton-on-Tees; Messrs. Ingram and Royle, London; Messrs. King and Co., London; Messrs. Roberts and Co., Festiniog; Mr. Iliffe, Kendal; Dr. Thornley, Newry; Dr. Nicholls, Chelmsford; Dr. Creed, Greenwich; Dr. Scoresby-Jackson, Rechfoot; Dr. Sheen, Cardiff; Mr. Bradburn, Brighton; Dr. Tomkins, Manchester; Mr. Stewart, Windermere; Mr. Cooke, London; Mr. H. Kiernander, Plympton; Dr. J. B. Russell, Glasgow; Mr. Tyler, London; Mr. M'Callum, Ayr; Mr. Tressider, London; Messrs. Allen and Son, London; Mr. Lawson, Peckham; Mr. Butler, Richmond; Mr. Lambert, London; Mr. Patterson, Redditch; Mr. Page, Newcastle; Mr. Abbott, Stafford; Mr. Browne, Smithfield, South Africa; Messrs. Ladd and Son, Canterbury; Mr. Everitt; Dr. Tatham, Salford; Mr. Browne, Liverpool; Mr. Renshaw, Stretford; Mr. Lewis, Birmingham; Dr. Cameron, Huddersfield; Dr. R. Lawson, Exeter; Messrs. Sutton and Sons; Mr. Hill, Tywardreath; Mr. Fennell, Dublin; Mr. Casson, London; Mr. Kempthorne, Callington; Mr. Slater, Ripon; Messrs. Robertson and Co., Wellgate; J. H. S.; A Provincial Pupil; Nanta; An Officer of Twenty-five Years' Standing; Justitia; A late Surgeon in the Brazil and River Plate Steam Navigation Company; A. B.; Lex Medica; E. W., Brixton; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Marsden, London; Mrs. Scaife, Harrogate; Mr. Glyde, Ipswich; Mr. Lucas, Burnell; Messrs. Smith and Son, Manchester; Mr. Hughes, Bangor; Mr. Edington, Southport; Mr. Taylor, Scarborough; Mr. Morton, Sheffield; Mr. Hensch, Brixton; Mr. Earp, Nottingham; Messrs. Maclachlan and Co., Edinburgh; Mr. Welch, Camelford; Mr. Arnison, Yoxall; Mr. Hadley, Welford; Messrs. White and Chignall, Havant; Mr. Duckett, Birmingham; Dr. Sergeant, Camberwell; Mr. Thomas, Nazberth; Messrs. Lee and Nightingale, Liverpool; Mr. Marshall, Mitcham; Mr. Paulsome, Loughborough; Messrs. Block and Leach, Bath; Mr. Sells, Guildford; Mr. Laver, Colchester; Mr. Wylding, Church Stretton; Mr. Joyce, Ashby-de-la-Zouch; Dr. Watson, Mere; Dr. Moore, Scarborough; Rev. D. Hughes, Sudbury; Mr. Townsend, Exeter; Dr. Haines; Dr. Booth, Padiham; Mr. Rigden, Thornton; Mr. Ransom; Messrs. Brown and Gardner, Swaffham; Mr. Corder, Brighton; Dr. Kelly, Rotherhithe; D. N. W.; Practitioner; Medicus, Chesterfield; P. S. F.; Gamma; M.B.; G. R. F., Rhyl; P. N. N. G., Hull; R. B., Preston; P. F.; Medicus, Malmesbury; M. R. S., Birmingham; Physic; T. C., Northampton; E. R. S.; M. D.; Forceps; A. K., Normanby; C. E. F., Guernsey; E. C. H., Reading; Assistant, Dover; A. H., M.D.; A. B., Oxford; L. T.; C. E. A., Festiniog; B. M.; Medicus, Clevedon; Licentiate; Physician, London; Medicus, Liverpool; Medicus, Colchester; Doctor, London; L., Rickmansworth; C. D. E.; Medicus, Sheffield; J. L. A.; L. G. P., Farnworth; W. F., London; Surgeon; Experientia; Alpha, Hull; S., London; L. M., Wigan; O. P., London; J. T. N., Gloucester; L.R.C.P., Bedford; M. H., Brackley; F.R.C.S.; Medicus, Raunds; Alpha, Newport; B. A., Cambridge; Doctor, Gamlingay; Medicus, Birmingham; Sigma; Longissimus Dorsi; A Constant Reader.

Church of England Temperance Chronicle, Western Mail, Britannia, South-Eastern Advertiser, Leicester Daily Post, Guy's Hospital Gazette, Daily Express, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, AUG. 22ND, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Aug. 16	29·41	S.W.	49	64	107	71	57	0·22	Cloudy
,, 17	29·85	W.	54	60	106	72	52	0·21	Fine
,, 18	30·03	S.W.	60	69	112	76	53	..	Cloudy
,, 19	29·85	E.	61	64	103	73	54	..	Overcast
,, 20	29·93	E.	57	63	88	69	54	..	Cloudy
,, 21	30·03	E.	55	59	97	70	54	..	Overcast
,, 22	29·97	E.	59	64	85	70	57	..	Cloudy

Medical Diary for the ensuing Week.

Monday, Aug. 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 27.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.

Wednesday, Aug. 28.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 30.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 31.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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